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ABSTRACT

The instructor training institutes were conducted to familiarize State and local emergency medical instructional personnel with National Highway Traffic Safety Administration (NHTSA) curriculum materials and to enhance their instructional capabilities with this material. Thirty-hour courses, correlated with the content of the Emergency Medical Technician (EMT)-Ambulance course, were held at five locations for a total of 64 trainees. The four major sections of the report contain: (1) a description of enrollee selection procedures and determination of institute sites and dates; (2) a description of enrollee background and responsibilities relative to EMT training; (3) institute outlines and schedules, institute procedures, and a summary of generally favorable comments regarding institute coverage and value; and (4) a report on the status of EMT training programs with which enrollees are involved. Appended material (141 pages) includes: samples of forms completed by enrollees, enrollee roster, outlines of the institute lessons on teaching methods, and NHTSA curriculum material summaries. (Author/MS)

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EMERGENCY MEDICAL TECHNICIAN INSTRUCTOR TRAINING INSTITUTE

Dunlap and Associates, Inc.
One Parkland Drive
Darien, Connecticut 06820

Contract No. DOT-HS-099-1-141
June 1972
Final Report

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PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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16. Abstract

The purpose of the instructor training institute was to familiarize state and local emergency medical instructional personnel with NHTSA-developed curriculum materials and to enhance their instructional capabilities with this material. A thirty-hour course was designed to correlate with the content of the Emergency Medical Technician-Ambulance course. Vocational Education faculty of Central Connecticut State College were oriented to become EMT-Ambulance teacher trainers. Five geographically-dispersed institutions of higher education were selected as local hosts during the fall of 1971. NHTSA, through its regional offices, state governor's representatives, and state or local agencies, identified and referred approximately thirteen trainees to each site. Trainee comments were used to evaluate (1) the NHTSA procedure for identifying, selecting, and referring state and local personnel to Dunlap and Associates, and (2) to evaluate the content of the instructor training course and its conduct.

Sixty-four trainees from thirty-nine states completed the course. In general, the initial line of communication between the trainee and the institute operator was cumbersome, time consuming and, in instances resulted in an unclear understanding of the institute objective. A high correlation was found between trainee's evaluations of the institute and characteristics of the trainees as (1) either state or local personnel or (2) as either instructional or other personnel.

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FOREWORD

The U.S. Department of Transportation, National Highway Traffic Safety Administration, recently supported the development of a Basic Training Program for Emergency Medical Technicians--Ambulance. The detailed Instructor's Lesson Plans and Course Guide, prepared by Dunlap and Associates, Inc., were submitted to the states as guidelines for implementing the training requirements specified by Highway Safety Program Standard No. 11.

In order to assist states in making the training program operational, the National Highway Traffic Safety Administration considered it important to develop a cadre of training individuals to serve as instructors of the basic EMT course. NHTSA therefore supported the conduct of five regional Emergency Medical Technician Instructor Training Institutes in the fall of 1971. The institutes were conducted by Dunlap and Associates, Inc., in collaboration with educators from Central Connecticut State College, New Britain, Connecticut.

The study represents one of four contracts funded by NHTSA in fiscal year 1971 for the purpose of conducting instructor training institutes for highway safety courses. Institutes for emergency medical technician and driver license examiner were scheduled for the fall of 1971. Those for breath examiner specialist and accident site investigator were planned for the spring of 1972.

Dr. Aaron Adams of the National Highway Traffic Safety Administration served as Contract Technical Manager. Mr. Robert Motley of the Office of Standards Development and Implementation served as an advisor. The project was directed by Miss Arlene Cleven of Dunlap and Associates, Inc. Mr. Joseph T. Fucigna, Executive Vice President of the Corporation, served as Responsible Corporate Officer. Educators from Central Connecticut State College who taught at the various Institutes were Dr. Joseph Duffy, Dr. Philip Masley, Dr. John Chow, Dr. Andrew Baron, Dr. Raymond Ross and Mr. George Barnhardt.

CONTENTS

	Page
FOREWORD	ii
SUMMARY AND RECOMMENDATIONS	iv
INTRODUCTION	1
INSTITUTE PLANNING	4
Enrollee Selection	4
Determination of Institute Sites and Dates	6
Summary Comments	8
INSTITUTE ENROLLEES	9
Role in EMT Training	9
Organizations Represented	11
Formal Education	12
Emergency Medical Care Experience	12
Previous Teaching Experience	13
Summary Comments	14
INSTITUTE CONDUCT AND EVALUATION	15
Institute Outlines and Schedule	15
Institute Conduct and Procedures	21
Institute Evaluation	23
Summary Comments	26
PROGRAM STATUS	27
Date Programs Started	28
Number of Courses Given	28
Scheduling Lessons	29
Program Changes and Accomplishments	30
Problems and Special Interests	31
Summary Comments	32
APPENDICES	
A. Forms Completed by Enrollees	A-1
B. Enrollee Roster	B-1
C. Institute Outlines	C-1
D. NHTSA Curriculum Material Summaries	D-1

SUMMARY AND RECOMMENDATIONS

Under this contract, the National Highway Traffic Safety Administration supported the conduct of five regional Emergency Medical Technician Instructor Training Institutes. The purpose of these five-day, 30-hour institutes was to develop a cadre of trained instructors to teach the NHTSA curriculum package: Basic Training Program for Emergency Medical Technician--Ambulance.

Since the emphasis of the institutes was on the development of teaching skills as distinct from emergency care skills, topic coverage included discussions of the teaching-learning process, how to teach information lessons, how to teach skills, use of instructional aids and developing written tests. EMT curriculum-related topics included discussions of the EMT course and course documents, course requirements, course planning and management considerations, and conducting practice, test and evaluation lessons. In practice teaching workshops, each enrollee was given an opportunity to teach from a segment of the lesson plans. A session on application of principles learned at the institutes provided hints on how enrollees might use what they have learned to conduct or plan their own instructor training courses at the local level.

Institutes were held in the fall of 1971 in New Britain, Connecticut; Lansing, Michigan; Stone Mountain, Georgia; Kansas City, Missouri; and San Mateo, California. They were taught by university educators from Central Connecticut State College in New Britain, Connecticut. Enrollee follow-up services included telephone contacts to determine the status of their EMT training programs, any unique means they had devised to implement training, and any problems they had experienced. Because of the large demand, the institute outlines were duplicated and a copy distributed to each enrollee.

With regard to institute planning, a problem developed because states were asked to provide names of potential candidates before sites and dates for the various institutes were determined. For these candidates, a time period of 2 to 3 months elapsed between their initial expression of interest and their assignment to an actual institute. Although the actual lead time between assignment of a candidate to a specific institute and the start of that institute was 3 weeks at a minimum (and ranged up to 6 weeks) for all candidates, it appears that an indication of sites, dates and institute objectives (before requesting specific candidate names) might have simplified the enrollment process. It is felt that the procedure used resulted in

some cancellations due to conflicts of schedule and some due to early misconceptions on the purpose of the institutes.

A total of 64 enrollees completed the instructor training institutes. In the post-institute telephone calls, it was learned that 31 enrollees have given courses or currently have courses underway that are using the DOT curriculum and an additional nine enrollees are planning courses that have not yet started. Four would like to implement the training program within their local agencies but have no plans as yet. Fourteen enrollees are using training materials other than the DOT curriculum, and six have no responsibility for EMT training within their communities or states.

Most programs which use the DOT curriculum got started within the last year and a half; four programs were underway prior to 1971. Enrollees have developed unique scheduling systems to solve local travel problems, have added lessons as needed at the local level, have revised training materials as appropriate to their needs, and have video-taped lessons to solve the problem of lack of physician instructors. Enrollees report problems in obtaining physician instructors, funding, and developing written tests.

Approximately half of the attendees serve in a statewide coordinating role with little or no direct responsibility for teaching. The remainder serve as local coordinators or instructors; their teaching responsibilities typically cover non-medical subjects, skill practice sessions and testing. Enrollees range from state officials in charge of emergency medical services to emergency medical technicians. Education varies from less than high school to individuals with Master's degrees in education and public health. Both previous emergency care and teaching experience vary from none to 20 or more years.

The institutes were well received by those who clearly understood the objectives and scope of the training program. However, some confusion existed among enrollees regarding the purpose of the institutes. Initially, the problem appeared to be one of insufficient information filtering down to prospective enrollees. However, even after being informed directly, some enrollees attend the institute with expectations of topic coverage other than instructor training. Some individuals were disappointed that the institutes were not more directly related to EMT training implementation and its problems and that there was not a contractor or NHTSA representative knowledgeable about the training curriculum at each institute.

With regard to the intended purpose of the institutes, namely, to develop an initial cadre of training instructors to teach the EMT course using NHTSA curriculum materials, a few comments are in order. First, one cannot develop an initial cadre of trained instructors to teach a course when there already exists a large group of instructors (trained and untrained) teaching that very course. One can only hope to improve on their training skills. Second, most of the instructors for the course are physicians as was recommended by the curriculum package. As had been expected by both the contractor and NHTSA at the start of the contract, physician instructors did not attend the training institutes. Therefore, individuals with major teaching responsibility for the course were not present. Third, as had been expected, a large number of people with coordinating as opposed to teaching responsibilities attended the course. Their attendance at the training course is by no means considered undesirable nor unexpected. Since the highway safety program occupational development schedule makes no provision for training course planners, it seems logical that they would wish to attend the instructor training institutes. Exposing such individuals to teacher training can serve to make them appreciative of the value of such programs in their overall training plans and can provide them with the impetus and materials to plan similar programs at the local level. In view of the preceding comments regarding instructors of EMT courses, it is not considered that use of better selection procedures would necessarily have assisted in the identification of on-line instructing as contrasted to coordinating personnel.

The laudatory comments received from enrollees regarding course conduct and coverage and the enthusiasm with which the instructor training aspects were received are sufficient to serve an encouragement for the continuation of instructor training programs for other highway safety programs. Critical comments received on this series of institutes should provide valuable information for planning future institutes.

Based on information obtained during this series of institutes, the following recommendations are made for future training programs for highway safety occupations:

- Instructor training institutes should be conducted as soon as possible after the development of instructional materials. Delay of instructional training until well after programs have been implemented in many areas (as was the case with EMT training) makes the instructional training appear anti-climatic and contributes to enrollee expectations of topic

coverage other than instructor training. A copy of the Course Guide should accompany announcement of the instructor training institutes to assure that all decision-makers are knowledgeable about the highway safety occupation.

- Sites and dates for the institutes should be scheduled early in the planning phase prior to soliciting specific enrollee names. Enrollee patterns can be determined from an initial indication of interest in the program by the states. Conducting the first institute in the series at "home base" should be continued; others should be given in various areas of the country to minimize enrollee travel time.

- Consideration should be given to continuing the use of colleges as hosts for the various institutes. They proved helpful in locating facilities, lodgings and audio-visual equipment. In addition, they might provide the impetus for future instructor training programs for highway safety occupations.

- An opportunity should be provided for institute attendees to share experiences relative to training for the given occupation. Even if the training curriculum materials are "just off the press," typically some form of training has been provided in the area since highway safety occupations do not represent new functions. Enrollees can benefit greatly by the prior experiences of others.

- Although the teacher training aspects of the institutes should continue to be taught by university educators, program-related topics should be covered by an individual who is knowledgeable in the development of the curriculum materials. Such a person should be in attendance for one or two days at a minimum to teach such lessons and to provide an opportunity for enrollees to obtain answers to specific questions they have concerning training for the given occupation.

In addition to the preceding recommendations regarding future instructor training institutes for highway safety programs, a few comments are in order regarding recommendations for continued support by NHTSA of the

emergency medical technician training program. It is recognized that NHTSA wishes that states and local areas maintain a high degree of autonomy in implementing training; however, it was apparent from information communicated by various institute attendees that standardization of programs as well as efficiency in program implementation could be achieved by improved communications among individuals responsible for training. Enrollees expressed great interest in learning how specific training problems were solved in other states and unique means that have been developed for implementing training. Sharing of such information could be accomplished through sponsorship of regional or national workshops for course coordinators or planners or through the sponsorship of a newsletter.

INTRODUCTION

The U. S. Department of Transportation, National Highway Traffic Safety Administration, recently supported the development of a Basic Training Program for Emergency Medical Technicians--Ambulance. The program was submitted to the states as guidance for implementing the training requirements specified by Highway Safety Program Standard No. 11.

The program consisted of detailed Instructor's Lesson Plans designed to be used by the instructor in the day-to-day conduct of the course, a Course Guide designed to be used by the course coordinator or administrator in planning the course, a Course Coordinator's Orientation Program developed to assist state officials in training local or regional course administrators, and a final report entitled Concepts and Recommendations which described development of the training program and discussed concepts for an EMT career structure.[1] NHTSA summaries of these documents appear in Appendix D. A suitable reference text for the course, Emergency Care and Transportation of the Sick and Injured, was identified.[2]

The development of instructional materials represents one phase of training program development. In order to aid states in making the program operational on a wide scale, NHTSA considered it important that the program include instructor training to assure that a group of trained individuals throughout the country would be available to teach the course.

The objective of the current training effort, therefore, was the development of an initial cadre of trained key state and local instructors to teach the basic NHTSA curriculum materials. This objective was to be accomplished by the conduct of five regional instructor training institutes whose emphasis would be exposure of key individuals to the NHTSA curriculum materials and the development of teaching skills. The scope of the contract included the following:

- Development of lesson outlines for a five-day 30-hour EMT instructor training institute.

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[1] U. S. Government Printing Office, Washington, D. C.; 1970-1971. The source of obtaining copies and pricing data are given on pp. D-2, D-7 and D-13.

[2] American Academy of Orthopaedic Surgeons, Chicago, Illinois, 1971.

- Identification and selection of instructor candidates with the assistance of the appropriate Governor's representatives--selection of candidates to be limited to those knowledgeable in emergency care, with little or no previous teaching experience, and with a firm advance commitment to conduct a training course using NHTSA curriculum materials within 90 days following completion of the instructor training institute.

- Identification of five institute sties and dates and completion of all local arrangements, including enrollee lodging accommodations, teaching facility, instructional equipment and supplies.

- Conduct of the five institutes.

- Provision of on-site follow-up services as required to enrollees during the conduct of their first solo course.

Before proceeding to a discussion of study procedures and results, it would be worthwhile to discuss some considerations known both to the contractor and to NHTSA that affected the ultimate conduct of the contract. These include the following:

- Although published by the Government Printing Office in 1970 and 1971, the curriculum materials had basically been completed and pilot tested in the spring of 1969. . At the time of the instructor training institutes, therefore, many states already had operational EMT training programs utilizing the NHTSA training materials.

- A mix of instructors (largely physician specialists) had been recommended in the training package as the ideal faculty for the course. It was anticipated that physicians would not likely attend the course since it was not expected that they could spare five days for teacher training.

For the above reasons, it was expected that many institute attendees might not, in fact, have a major teaching responsibility. It seemed reasonable that many individuals serving in an administrative or coordinating capacity might attend the course, and that such individuals might have responsibility for programs that had been in existence for some time.

Therefore, it was determined that no commitment to initiate a course within 90 days of completion of the instructor training institute should be required of institute enrollees. In addition, it was realized that the nature of follow-up services as originally conceived (e.g., on-site assistance during the first solo course) would in most cases be inappropriate or not required.

The preceding comments are set forth here since they affected enrollee selection procedures, institute topic coverage and the nature and extent of follow-up services provided under the contract. Each of these is discussed in the appropriate section of the report.

The remainder of this report contains the following sections:

- Institute Planning--description of enrollee selection procedures and determination of sites and dates for the various institutes.
- Institute Enrollees--description of enrollee background and responsibilities relative to EMT training.
- Institute Conduct and Evaluation--institute outlines and schedule, institute procedures, and summary of comments obtained at the various institutes regarding institute coverage and value.
- Program Status--the status of EMT training programs with which enrollees are involved.
- Appendices
  - Forms completed by enrollees
  - Enrollee roster
  - Institute outlines
  - NHTSA curriculum material summaries

INSTITUTE PLANNING

Institute planning activities included selection of enrollees and determination of sites and dates for each institute. Although institute planning efforts are discussed separately below, each of these activities was carried out more or less concurrently. For example, an initial indication of number of enrollees expected from each state served as the basis for determining locations of each of the institutes. However, actual enrollee applications and cancellations were received up to and including the first day of each institute. In addition, the institute outlines and schedule were developed throughout the study planning phase; they are discussed in the section on Institute Conduct and Evaluation since the outlines in effect represented the content of the institutes.

Enrollee Selection

A series of enrollee selection procedures was designed to identify 15 instructor candidates to attend each of the five regional institutes for a total national enrollment of 75. These procedures were as follows:

- A memorandum from NHTSA to the 10 regional administrators requested that they "obtain from the Governor's Representative the names, titles, and locations of candidates." It was further indicated that "it is intended to enroll only those instructors who (1) will be teaching with NHTSA instructional materials and (2) will have had little or no previous teaching experience."[1] This particular chain, therefore, included NHTSA, its regions, the state Governor's representatives, interested state or local agencies, and actual candidates.

- The response to the preceding memorandum resulted in an oversubscription to the institute. Based on this response, NHTSA established enrollee quotas by states in order that a total national enrollment of 75 would not be exceeded.

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[1] Memorandum from Acting Director, Office of State and Community Comprehensive Programs, TSP, to Regional Administrators, Regions I through X, Subject: Preliminary Planning of Instructor Training Institutes, 9 July 1971.

- NHTSA mailed to the regional administrators 75 numbered copies of a registration form to be completed by potential enrollees. Each form contained both an identifying number and the state to which that number was assigned, based on the quotas established in the preceding step. The form requested information on the enrollee, his state's current and planned EMT programs, and his preferred dates for attending the institute.[1] Completed forms were mailed by enrollees to Dunlap and Associates, Inc. A copy of this form is included in Appendix A.

- A memorandum from Dunlap and Associates, Inc., confirmed the candidate's enrollment at a given institute and explained institute coverage, lodging, travel facilities, and reimbursement procedures. A tear-off sheet to be returned by the enrollee (indicating either that he would personally attend the institute or the name and address of his alternate) was intended to complete the enrollment process. A copy of this memorandum is included in Appendix A.

The response from NHTSA's original memorandum to the regional administrators and NHTSA's subsequent establishment of candidate quotas by states provided a national pattern of prospective attendees. On the basis of this pattern, selection of sites was made for the five institutes. Site selection is discussed below.

Although the initial response to the institute had resulted in an oversubscription, the actual numbered forms by state were received slowly by the contractor and some were never returned at all. In addition, some individuals who submitted forms subsequently withdrew their names; some of these supplied alternate names and some did not. There appeared to be several reasons for the problems regarding enrollment of actual candidates:

- There was confusion regarding the purpose of the institute. Although materials sent to the regions by NHTSA indicated that the emphasis of the institutes was on teacher training, apparently this fact did not in all instances filter down to prospective candidates. This resulted in several cancellations when enrollees received the Dunlap memorandum describing institute coverage. Even after receiving the Dunlap memorandum, some enrollees arrived at the institute with misconceptions about its purpose.

[1] Preferred dates were not used since, in most cases, institute sites and dates had been determined prior to receipt of enrollee forms.

- The lead time (ranging from 3 to 6 weeks) about the sites and dates of institutes to which enrollees were assigned resulted in some cancellations or assignment of alternates due to conflicts in schedule.

- Some states were contacted by phone when forms were not received. Reasons given for not returning forms included lack of permission for potential candidates to travel out of state and lack of suitable candidates.

- Some candidates who had submitted forms simply failed to show or cancelled at the last minute due to unforeseen events.

The result of the selection process was that the national quota was not met nor was the site quota met at any of the institutes. The actual number of trainees completing the program numbered 64. (A roster of enrollees appears in Appendix B.) It might be noted that, although original communications indicated that candidates might be restricted depending on their use of NHTSA curriculum materials and their teaching experience, no such restrictions were imposed and all candidates who were received through the specified enrollment process were accepted.

Determination of Institute Sites and Dates

It was determined early in the contract that the first of the five institutes should serve as a pilot test. It was therefore considered appropriate for it to be conducted at Central Connecticut State College in New Britain, Connecticut. The educators who would be teaching the various institutes were all members of the CCSC staff. Giving the first institute at Central Connecticut, therefore, permitted all institute instructors to observe most of the week's training sessions. This observation, plus the outlines prepared for each institute, assisted in standardizing institute content and presentation at all of the regional institutes.

Criteria used for selection of sites for the other institutes were:

- Institutes should be held in all areas of the country to accommodate all enrollees.

- The institutes should preferably be held near major transportation centers to minimize enrollee travel time.

- It was considered desirable to have a college to serve as host for each institute.

- Suitable classroom facilities and lodgings should be available.

In selecting dates for the institutes, it was determined that there should be one week between the first and second institute to permit time to make changes should they be warranted as a result of the pilot test. Remaining institutes could be run in sequence, the only constraint being that an institute would not be held in any week in which there was a holiday.

Resulting sites, dates, and host colleges[1] for the various institutes were:

- October 11-15, 1971: New Britain, Connecticut
  Host: Central Connecticut State College
  Classes: Conducted at the college

- October 25-29, 1971: Lansing, Michigan
  Host: Lansing Community College
  Classes: Conducted at the college

- November 1-15, 1971: Stone Mountain, Georgia
  Host: DeKalb Community College, Clarkston, Georgia
  Classes: Conducted at enrollee lodging

- November 8-12, 1971: Kansas City, Missouri
  Host: Metropolitan Junior College District
  Classes: Conducted at enrollee lodging

- November 15-19, 1971: San Mateo, California
  Host: College of San Mateo
  Classes: Conducted at enrollee lodging

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[1] Mr. Andy Korim of the American Association of Junior Colleges, Washington, D.C., assisted in identifying suitable host colleges for the last four institutes.

Summary Comments

A problem in institute planning activities developed because the first memorandum to the NHTSA regions requested that they obtain names of potential institute candidates. For these candidates, a time period of 2 to 3 months elapsed between their initial expression of interest and their assignment to an actual institute. Although the actual lead time between assignment of a candidate to a specific institute and the start of that institute was 3 weeks at a minimum (and ranged up to 6 weeks) for all candidates, it appears that an early indication of sites and dates (before requesting specific candidate names) would have simplified the enrollment process. In addition, since there was some confusion on the purpose of the institutes, an early indication of institute coverage to potential enrollees might have solved some of the enrollment problems and served to identify better an individual who would benefit most from the program.

INSTITUTE ENROLLEES

As stated previously, a total of 64 individuals completed the instructor training institute. (A roster of enrollees appears in Appendix B.) These individuals came from 39 different states; no more than four enrollees came from any one state. Their responsibilities relative to EMT training and some of their characteristics are discussed below. Specifically, information is provided on their role in EMT training, the organizations they represent, their formal education, their EMT experience and their teaching experience.[1]

Role in EMT Training

As had been expected, the majority of attendees at the institutes serve more in a coordinating than in an instructor role. Some coordinators also teach, but their teaching role is typically limited to one or two lessons of the course. It appears that, where the DOT curriculum has been accepted, the recommended faculty in most instances has also been adopted. That faculty consists largely of physician specialists for medical subjects. Lay instructors were recommended only for non-medical subjects and practice sessions. Those who report that they teach the DOT course usually indicate that they teach only non-medical subjects.

The role of the 64 attendees relative to EMT training is tabulated below. The tabulation also shows whether or not the enrollees are currently using the DOT curriculum materials.

Status		Enrollees	
Currently using DOT curriculum:			
Coordinating:	statewide	17)	
	local	11)	= 31
Teaching		3)	
Planning to use DOT curriculum:			
Coordinating:	statewide	6)	= 9
	local	3)	
Would like to use DOT curriculum:		4	
Using other curriculum materials:			
Coordinating:	statewide	6)	= 14
	local	2)	
Teaching		6)	
No responsibility for EMT training:		6	
	TOTAL	64	

[1] Data presented in this section were obtained from the DOT enrollment form and from telephone contacts with enrollees which were provided as part of the contract follow-up services.

The table shows that 31 enrollees have already given DOT courses or currently have courses underway that are using the DOT curriculum. An additional nine enrollees are planning courses that have not yet started. Thus 40, or approximately two-thirds of the institute attendees, are using or planning to use the DOT course. As stated previously, the majority of these serve as coordinators, with 23 of them having a statewide coordinating responsibility. Those listed as having a local coordinating responsibility vary from responsibility for single communities to counties or larger areas of states; in some instances, they provide guidance to individual programs on an as-needed basis. Four enrollees would like to implement DOT training within their departments but have not started yet. Three of these are associated with law enforcement groups and one with a fire service.

Fourteen of the attendees are currently using training materials other than the DOT curriculum. In most instances (11 attendees) these enrollees are working with EMT training courses that have been well established in their respective states. Typically, they use their own lesson plans and student reference materials. Two of the enrollees are medical self-help instructors; in both cases, the states in which they reside are using the DOT materials but their personal responsibility remains with the medical self-help course. One enrollee has a statewide responsibility for EMT training; although he is interested in using the DOT materials, he has been unable to implement the course thus far largely due to the fact that his is a rural state and distances of travel are great. Therefore, he tends to use several short courses that are currently in existence for EMT training.

The tabulation shows that six of the institute attendees have no responsibility for EMT training and do not currently foresee responsibilities in this area. A brief description of these individuals follows:

- Two of these enrollees are motor vehicle inspectors; although they have a personal interest in emergency medical care and occasionally donate their time as volunteer instructors, they have no role in EMT training. They were sent to the course because those responsible for training in the state were too busy to attend the training institute. Incidentally, their state is using the DOT curriculum materials.

- One is a funeral director who has done some first aid training and apparently attended the course for general interest only. There is no DOT training program in his state as yet. He said he "came in the back door."

One is a fire service instructor with no previous experience in emergency medical care. His particular state had difficulty in getting knowledgeable candidates to attend the course.

Organizations Represented

Organizations represented by the 40 enrollees using or planning to use the DOT curriculum materials are:

Organization	Enrollees
State health department	21
College, university	5
Ambulance service	4
Fire service	2
Department of public safety	2
State--department unspecified	2
Regional Medical Program	1
Department of hospitals	1
Hospital association	1
Civil defense	1
TOTAL	40

As would be expected, in view of the large number of enrollees with statewide coordinating responsibilities, state employees represented the largest group of institute attendees. Typically, they are associated with state health departments, and a typical title is "Coordinator--Emergency Medical Services." Some serve in an assistant capacity to a director and some are coordinators for a specific area in the state. Those associated with academic institutions primarily have responsibility for planning or teaching courses at the particular institution.

Organizations represented by the 14 individuals not using the DOT curriculum are:

Organization	Enrollees
State health department	5
College/university	5
Fire service	3
Civil defense	1
TOTAL	14

All but one of these individuals indicated that they had either statewide or area responsibility for planning or teaching their particular program.

As stated previously, of the six individuals who have no responsibility for EMT training, two were motor vehicle inspectors, two were emergency medical technicians with a private ambulance service, one was a funeral director, and one was a fire service instructor. The four individuals who have not implemented training within their department but hope to do so are associated with law enforcement and fire services.

Formal Education

The level of education attained by enrollees is as follows:

Education	Enrollees
Less than high school	1
High school	38
Associate degree	2
Bachelor's degree	17
Master's degree	6
TOTAL	64

Two of the enrollees with Bachelor's degrees also were registered nurses and one also had an LLB. Two individuals had their Master's degrees in education and two in public health.

Emergency Medical Care Experience

Enrollees report the following years of experience in the emergency care field:

Years of Experience	Enrollees
None	2
Less than 1	2
1 - 2	16
3 - 5	15
6 - 10	12
11 - 20	6
Greater than 20	5
Not stated	6
TOTAL	64

It is interesting to note that two enrollees report no previous experience in emergency medical care. One of these is the state emergency medical services administrator and one is with a fire service. Most report between one and five years of experience; some have apparently spent their entire careers in the field.

Previous Teaching Experience

Enrollees were asked to indicate their previous teaching experience. Responses were inconsistent, sometimes indicating the years of experience and sometimes the type of experience. In one case, the individual reported his title. The information obtained is as follows:

Teaching Experience	Enrollees
None	10
DOT course	6
Emergency care	18
Military	5
Public school	2
Nursing assistants	1
Fire/police training	4
Associate professor	1
1 - 2 years	3
3 - 5 years	5
6 years	1
10 years	2
20 years	2
Not stated	4
TOTAL	64

Only 10 enrollees report no teaching experience prior to attending the instructor training institute. With the exception of a few enrollees, the actual quality or amount of teaching experience of the remainder are difficult to assess from the type of data provided. However, a few points are of interest. Six individuals report that they have previously taught from the DOT curriculum materials. Almost 30% of the enrollees report some experience in teaching emergency care courses; these include American Red Cross courses, medical self-help courses, and cardiopulmonary resuscitation training, among others. Some individuals report fairly substantial teaching experience. Five reported being responsible for training in their military careers, two taught in public schools, one is an associate professor in a junior college, and 10 report 3 or more years of teaching experience.

Summary Comments

The information presented in this section serves to point out two major items of interest regarding institute attendees:

- Over half of the attendees have coordinating as opposed to teaching responsibilities with regard to EMT training. Many of these have statewide coordinating responsibilities for EMS services, of which training is only one part. It might therefore be expected that their reasons for attending the institute might have been broader than teacher training.

- The students are heterogeneous in many respects. They ranged from state officials to emergency medical technicians in terms of job responsibilities. They ranged from no previous emergency medical care experience to over 20 years of experience. Some have had many years of experience working with emergency care programs that were well established in their states before the DOT training program was completed. Their formal education ranged from less than high school to Master's degrees including two enrollees with Master's degrees in education. Their previous teaching epxerience ranged from none to 20 years or more. With such a varied group, it might be expected that it would be difficult for the small number of enrollees at the institutes to find a common ground in communications.

INSTITUTE CONDUCT AND EVALUATION

In this section are discussed the outline and schedule used at each of the institutes, the procedures used and forms filled out in conducting the institutes, and evaluative information obtained from enrollees.

Institute Outlines and Schedule

Although the primary emphasis of the five-day institutes was on the development of teaching skills, the actual purpose was two-fold: to introduce enrollees to the NHTSA curriculum package and to teach them the fundamentals of teaching. As such, topic coverage for the 30-hour institutes covered the basics of teaching as well as descriptions of the course documents, discussions of course requirements, and course planning and management considerations. In addition, in view of the large number of non-teaching enrollees expected at the institutes, it was felt that a session should be included on how to use what was learned at the institutes in conducting instructor training at the local level.

Accordingly, in addition to introductory and closing sessions, it was determined that the following coverage would be required:

- Description of the EMT course and course documents
- Course planning and management
- The teaching-learning process
- Teaching information lessons
- Using instructional aids
- Developing skills
- Developing written tests
- Conducting practice, test and evaluation lessons
- Means of applying what the candidate learns at the institute in training other local instructors to teach the EMT course

- Practice teaching workshops in which each enrollee teaches from a segment of the curriculum materials and is evaluated on his presentation

The resultant institute schedule is shown in Figure 1. In developing the schedule, it was determined that, aside from an initial introduction to the course during the first morning, other course planning considerations should be interspersed with the teacher-training materials. In addition, it was determined that practice teaching workshops should be held in the morning and afternoon starting on the second day of the institute. In these workshops, students gave a presentation of approximately 15 minutes duration and were then critiqued for approximately 15 minutes. Since practice teaching workshops were inserted early into the schedule, some students taught from the lesson plans without the benefit of all the teacher-trainer instruction. However, it was felt that student interest would be better maintained by inserting practice teaching workshops throughout the schedule rather than by conducting them all at the end of the institute. In the critique, therefore, students were evaluated only on the teaching techniques presented at the time their workshop was inserted in the schedule.

For the practice teaching workshops, it was determined that enrollees should be able to demonstrate teaching both skills and knowledge. To assist enrollees in making skill presentations, certain emergency care equipment and supplies were provided at the institutes. These included bandages of various types, splints, and a resuscitation manikin.

The lesson outlines developed as part of this project are included in Appendix C. The document contains objectives and requirements for each lesson unit as well as details of coverage for the lesson. It also includes all handouts provided to enrollees at the institutes except the NHTSA curriculum materials.

The objectives of each of the lessons presented at the institutes follow:

1. Institute Overview

   Provide the enrollee with an overview of the objectives, scope and procedures of the Emergency Medical Technician Instructor Training Institute.

2. The EMT Course and Course Documents

   Familiarize the enrollees with:

COURSE SCHEDULE

EMERGENCY MEDICAL TECHNICIAN INSTRUCTOR TRAINING INSTITUTE*

A.M. 8:30	1. Institute Overview 2. The EMT Course and Course Documents 3. Course Requirements	8. Workshop: Teaching Information Lessons (3 enrollees) 9. Instructional Aids	12. Workshop: Demonstrating Skills (3 enrollees) 13. Course Planning and Management	16. Workshop: Skill Practice and Evaluation (3 enrollees) 17. Developing Written Tests	20. Workshop: Instructor Training Course Teaching Principles 21. Application of Principles Learned at Institute
11:30					
P.M. 1:00	4. Teaching-Learning Process 5. Instructor's Lesson Plans 6. Utilizing the Lecture/Discussion Technique 7. Workshop Planning	10. Workshop: Teaching Information Lessons (2 enrollees) 11. How to Teach Skills	14. Workshop: Demonstrating Skills (2 enrollees) 15. Conducting Practice, Test and Evaluation Lessons	18. Workshop: Skill Practice and Evaluation (2 enrollees) 19. Workshop: Developing Written Tests	22. Institute Review, Evaluation, and Graduation (including Reimbursement Forms Completion
4:00					

*At most institutes, the schedule was rearranged somewhat to permit enrollees to leave as early as possible on Friday.

Figure 1.

- Broad objectives of the EMT course
- The EMT career structure
- EMT course content
- EMT course emphasis
- Student requirements for EMT course completion
- EMT course documents

3. EMT Course Requirements

Review with the class the EMT course requirements for:

- Personnel
- Facilities
- Materials and equipment
- Training aids
- References

4. Teaching-Learning Process

Identify the four major phases involved in the pre-planning and execution of the teaching-learning act and key points pertinent to each phase:

- Preparation
- Presentation
- Application
- Evaluation

5. Instructor's Lesson Plans

Familiarize enrollees with the overall design of a lesson plan and how the four-step process was applied within and between lessons in developing the EMT course.

6. Utilizing the Lecture/Discussion Technique

Provide the enrollee with hints for effectively utilizing lecture/discussion techniques in developing student knowledge:

- Instructor qualities
- Obtaining class participation
- Hints for conducting information lessons

7. Workshop Planning

Inform enrollees of the procedures and assignments for the practice teaching workshops.

8. Workshop: Teaching Information Lessons

Provide enrollees with an opportunity to utilize lecture/ discussion techniques in teaching from segments of the lesson plans.

9. Instructional Aids

Discuss purpose and uses of instructional aids.

Discuss advantages, disadvantages and hints for effectively utilizing:

- Chalkboards and chart pads
- Prepared charts
- Slides and film strips
- Overhead transparencies
- Films
- Models

Provide practical experience in making simple instructional aids.

10. Workshop: Teaching Information Lessons

Provide enrollees with an opportunity to utilize lecture/ discussion techniques in teaching from segments of the lesson plans.

11. How to Teach Skills

Teach enrollees how to develop student skills:

- Emphasis of EMT course on practical aspects of emergency care
- Basics of teaching skills
- Materials and equipment required
- How to demonstrate skills
- Skill practice
- Complimenting and correcting the learner

12. Workshop: Demonstrating Skills

Provide enrollees with an opportunity to demonstrate the teaching of selected skills taught in the EMT course.

13. Course Planning and Management

Provide the enrollee with EMT course planning and management guidance:

- Initiating training programs
- Conducting training programs

14. Workshop: Demonstrating Skills

Provide enrollees with an opportunity to demonstrate the teaching of selected skills taught in the EMT course.

15. Conducting Practice, Test and Evaluation Lessons

Explain the uses of evaluation.

Provide enrollees with basic facts to consider in conducting practice, test and evaluation lessons.

Explain the importance of checklists in skill evaluation.

Provide enrollees with the opportunity to develop checklists for the skills covered in the workshops.

16. Workshop: Skill Practice and Evaluation

Provide enrollees with an opportunity to critique and evaluate skill performance.

17. Developing Written Tests

Teach enrollees how to develop written tests to evaluate achievement of knowledge using:

- True-false items
- Multiple-choice items
- Matching items
- Completion items
- Essay items

Provide enrollees with techniques for:

- Test construction, administration and scoring
- Interpretation of tests results
- Utilization of test results

18. Workshop: Skill Practice and Evaluation

Provide enrollees with an opportunity to critique and evaluate skill performance.

19. Workshop: Developing Written Tests

Provide each enrollee with the opportunity to develop a variety of written test items.

20. Workshop: Instructor Training Course Teaching Principles

Provide enrollees with a final opportunity to utilize teaching techniques taught in the Instructor Training Institute.

21. Application of Principles Learned at Institute

Enable the enrollee to aid other instructors in teaching the EMT course--discussion of how enrollee might apply what he has learned at the institute in providing brief instructor training courses at the local level.

22. Institute Review, Evaluation and Graduation

Provide enrollee with a review of major points covered in the institute.

Obtain enrollee comments and opinions on the value of the institute and their suggestions for improving the institute.

Describe procedures for completion of reimbursement forms.

Institute Conduct and Procedures

All institutes as planned proceeded on schedule. The number of enrollees attending each of the institutes was as follows:

New Britain, Connecticut	-- 11
Lansing, Michigan	-- 12
Stone Mountain, Georgia	-- 13
Kansas City, Missouri	-- 14
San Mateo, California	-- 14
TOTAL	64

As stated previously, enrollment remained open up to the first day at each institute. It had been planned originally to have 15 attendees at each institute, for a total of 75 instructors. Of the 11 missing candidates, four simply failed to show up. The remainder cancelled within a few days of the scheduled start of the institute and proposed no alternate. In most cases, the contractor would not have learned whether or not the individual was attending had a personal telephone call not been made.

Copies of the NHTSA curriculum materials were distributed to enrollees at each institute. These included the detailed Instructor's Lesson Plans, the Course Guide and Course Coordinator's Orientation Program, and Concepts and Recommendations, the final report which described development of the training program and the concept of an emergency medical technician career structure (see Appendix D for summaries of these materials). In addition, each enrollee received a copy of the American Academy of Orthopaedic Surgeon's text Emergency Care and Transportation of the Sick and Injured, which served as the basis for the development of lesson plans and is recommended as a suitable student reference for the course.

Student registration included completion of a registration form prepared by Dunlap and Associates, Inc., and designed to determine if, when and where the enrollee planned to initiate his next training program in emergency medical care. A copy of this form is included in Appendix A. The purpose of the form was to provide some indication of travel patterns that might be required should on-site follow-up services be needed at the enrollee's next training session. Since it was subsequently determined that on-site services would not be required in most instances, information requested on the form was not tabulated.

On the last day of the institute, enrollees completed both reimbursement and evaluation forms; copies of both forms appear in Appendix A. Enrollee reimbursement for travel and subsistence was made by mail, in most cases within one to two weeks following completion of the institute attended. The evaluation form was designed to obtain information on the value of the institute to the enrollee as well as information that might be useful in improving future institutes in the highway safety program. Information obtained from the evaluation form is presented below.

A completion certificate for the five-day course was prepared by the National Highway Traffic Safety Administration. The original intention of the NHTSA was to distribute completion certificates on the last day of the institute. In view of enrollment difficulties that arose, attendee names were printed on the certificates at the completion of the institutes, and certificates were subsequently mailed to the enrollees.

As stated previously, the original institute given at Central Connecticut State College in New Britain, Connecticut, served as a pilot test of the instructor training institutes. As a result of information obtained from the evaluation form as well as observations made by the contractor who monitored each session, only minor changes were made in the lesson outlines with one exception. The exception was that "hands-on" experience in making simple visual aids was provided at the remaining four institutes. All institutes, therefore, were conducted essentially in an identical manner. Two educators from Central Connecticut State College team-taught the first institute. The remaining four institutes were taught by four additional educators from the same college. A representative of Dunlap and Associates, Inc., who was knowledgeable about the program and about emergency medical care attended all sessions of the first institute as an observer; also at the first institute, an additional representative of Dunlap and Associates, Inc., attended the Wednesday sessions (see schedule) and taught the lesson on Course Planning and Management.

Institute Evaluation

The evaluation form completed by enrollees on the last day of each institute was relatively unstructured. It was designed to determine overall value of the institute as well as to obtain critical comments that might improve the design and conduct of the remaining EMT instructor training institutes or of other institutes in the highway safety program. Specifically, it asked enrollees to make comments or recommendations as appropriate in the following areas:

- Institute coverage (For example: What units of instruction were particularly helpful? Did some units appear unnecessary? Would you like to see other topics covered? Would you prefer more/less time devoted to some topics?)

- Institute value (For example: Did the institute adequately prepare you for your role as instructor? In what way could the institute be made more useful?)

- Other comments and recommendations

Due to the unstructured nature of the evaluation form, many enrollees did not answer the questions as posed. They tended, rather, to express freely their opinions about the institute, both pro and con. The following paragraphs contain summaries of information obtained. No attempt is made here to cover all points made on the evaluation forms. Rather, an attempt is made to synthesize feelings and expectations that led to success or failure of the institutes in the opinions of the enrollees.

With regard to institute coverage, approximately half (33) of the enrollees indicated that they felt all institute topics were beneficial. Three enrollees indicated that none of it was useful to them; these individuals reported that the course was no value to those who don't teach. Of the individual lessons, the three most frequently listed as beneficial were instructional aids, the practice teaching workshops, and developing written tests.

Those who had a generally positive attitude toward the institute were enthusiastic in their comments. They made such statements as, "Courses of this type should be a must for all state officials," "The institute was the greatest," "It was a very fine institute," "The total program was excellent."

For those who were disappointed in the institute, the disappointment stemmed largely from a lack of understanding of the objectives of the institute. As stated previously, many enrollment problems occurred because objectives of the institute were apparently not available to the enrollee at the local level early in the planning phase of the project. In addition, even after a Dunlap memorandum to each enrollee clearly listed the topic coverage, some enrollees came to the institute with different expectations. As a result, seven of the enrollees specifically indicated on the evaluation form that the objectives and the scope of the institute had not been clear. Three others either stated that, if instructor training was the objective, reorganization in the selection of attendees was required, or indicated that the instructor was unfamiliar with student backgrounds (as if to imply that his topic coverage would have been different had the instructor known who the attendees were).

In addition to the preceding clearly expressed misunderstanding regarding the objectives and scope of the course, others expressed disappointment that the institute was not more directly related to specific problems with the NHTSA training program. For example, eight enrollees expressed the need for round-table discussions or workshops in which they could discuss specific EMT training course problems both with their counterparts in other states and with an individual knowledgeable in emergency medical care (a Dunlap or NHTSA representative who was thoroughly familiar with

the field and with the development of the curriculum materials). Enrollees expressed the need for standardization of various course elements and had expected to be provided with updated materials on the course--for example, refresher courses, new technique in emergency care, revisions of documents, previews of slide series that are now available, etc. It is interesting to note that none of these comments appeared at the first institute where at least one Dunlap representative was available for the entire week's program.

One further problem resulted because of the heterogeneity of the group. As stated previously, enrollees included, among others, state officials responsible for emergency medical care systems, health officials, educators, and emergency medical technicians. In addition, from their performance in the practice teaching sessions, it was apparent that some of the individuals who claimed to be experienced in emergency medical care were inexperienced.

In summary, regarding course coverage, the institutes were well received by those who understood the purpose of the institutes. Some of these, however, were disappointed that the information was not more directly relevant to the NHTSA curriculum materials or that an emergency medical care representative was not available to discuss course problems and standardization with them. For some attendees, unfortunately, the primary objective of the institutes, i.e., instructor training, was misunderstood.

When asked whether the institute had adequately prepared them for their role as instructor, 27 attendees responded that it had. An additional 15 individuals did not answer "yes," or "no" but made such comments as, "It went a long way for preparing me for the role of instructor," "It was a help," "I am already an instructor but the institute showed me what a rut I'm in and ways to organize and improve my methods." Two individuals reported that they are not teachers but believe the institute would be valuable if they were. Two reported that it was difficult to assess how well it had prepared them for teaching at this time; they indicated that they would know better when they had an opportunity to practice what they had learned.

Only seven enrollees reported that the institute had not prepared them for their role as instructor. Reasons given included the fact that they would not be teaching, that a person cannot be taught to teach in one week, that they were biased toward the military method of instructor training, and that they are already teachers and personally gained only a few points over what they know already. It is interesting to note that two individuals (who previously had indicated experience in emergency medical care) reported that they were not knowledgeable in the field and therefore could not consider themselves EMT instructors.

Other comments and recommendations were generally related to those discussed above. The following points might be of interest:

- When expressed, comments regarding the quality of instruction provided by the Central Connecticut State College educators were exceptionally laudatory.

- Because of the small group of enrollees at each institute, the opinions of a vocal individual in the group would be expressed by others in the group. Therefore, there was a tendency to have specific types of comments repeated at one and only one institute. For example, an enrollee at one institute was familiar with micro teaching and the use of video tape; comments regarding value of micro teaching were obtained only from that institute. Comments critical of the curriculum materials were received from only one institute. Comments regarding the fact that the instructor was not adequately informed about the job responsibilities of the attendees were received from only one institute.

Summary Comments

In summary, the five institutes proceeded on schedule and were well received by enrollees who clearly understood the objectives and scope of the training program. Some appeared at the institutes with misconceptions regarding the objectives of the institute. Some were disappointed that the institutes were not more directly related to the NHTSA curriculum materials and that an emergency medical care representative was not in attendance.

PROGRAM STATUS

It became apparent early in the study that the nature of follow-up services as originally planned under the contract, that is, on-site assistance during the enrollee's solo EMT training course, would be neither appropriate nor required. Enrollees at each institute were informed that follow-up services might be available and were requested to write to the contractor to express their needs. The only requests received were for copies of the outlines used by the institute instructors. Personal telephone calls to the enrollees at the completion of the institutes resulted in one request for on-site services and confirmed the enrollee interest in receiving the institute outlines. As a result, the nature of the follow-up services provided under the contract consisted of the following:

- A contractor's representative spent two days in Vermont at the request of the state EMS coordinator, an institute enrollee. The representative provided consulting services primarily in the area of course coordination. Topics covered included training aids, scheduling classes, instructor personnel, etc.

- Institute outlines were reproduced and distributed to each enrollee.

- Personal telephone contacts were made with enrollees to determine the status of their programs and the types of problems they are encountering.

This section summarizes the information obtained from the telephone calls. Coverage is limited to 26 enrollees (from 22 states) who are currently using the NHTSA curriculum materials. As reported previously, the actual number of enrollees using the NHTSA curriculum materials is 31; however, in five cases individuals have equal responsibility for training with others in the state or serve in a subordinate role to others. To report information from these five enrollees, therefore, would result in duplicating information obtained from other individuals in the states. Of the nine enrollees planning to use the NHTSA curriculum materials (and not covered here), four are currently awaiting funding for their programs, two have just received approval and funding, and three are having difficulties in implementing the program largely because of distances of travel in rural areas of their states.

As with the information obtained on institute evaluation, the telephone interviews were unstructured in nature. The resultant information is therefore not easily summarized in tabular form, nor was the type of information obtained from each enrollee identical. However, an attempt will be made to summarize the major points learned during these telephone contacts, with the emphasis being given to means by which training has been individualized to fit the needs of particular states and problems that have arisen in different states.

Date Programs Started

In 21 cases, enrollees provided information on the dates programs got started in their states. Some were specific, for example, "October 1971," others were general, for example, "three years ago," "early last year." Summarizing by year, we have the following data:

- 1969 -- 1 program
- 1970 -- 3 programs
- 1971 -- 11 programs
- 1972 -- 6 programs

Most of the DOT programs have gotten underway within the last year and a half, with only a few programs being underway prior to 1971. One of these programs, recented started, is actually the DOT refresher (not basic) course for emergency medical technician--ambulance. It was started prior to the basic course in view of the large number of individuals in the specific area with varied amounts of training; individuals responsible for training felt that the program should start with refresher training in order to assure that individuals previously trained were brought up to a standard and uniform level of knowledge and skills.

As might be expected, there was no apparent cause and effect relationship between the instructor training institutes and the initiation of a training program. Where training has been started since completion of the institutes, it usually had been previously scheduled or at least anticipated.

Number of Courses Given

Many of the programs represent continuing efforts, for example, courses given each semester at colleges and courses given on a once, twice or other yearly basis in a given area. Some, on the other hand, represent

only the beginning of training; in one case, only one course has been given in the state as a pilot test. In the particular state, distances of travel have made it difficult to implement the program statewide.

Eight enrollees report being associated with only one course either completed or in process. Two of these report that one or more additional programs are planned. One additional enrollee reports being associated with two courses, and plans to give them on a yearly basis. All but one of these individuals is responsible for local not statewide program planning.

In addition to the preceding, four enrollees report being associated with 6 to 9 courses, four with 10 to 11 courses, one with 15 courses, one with 22 courses, and one with 65 courses. All of these enrollees have statewide coordinating responsibilities. Some do not report the number of courses but simply indicate the number of individuals trained. These range from as few as 12 to as many as 1500.

The preceding information shows a wide range in development and conduct of programs with which enrollees are concerned. As stated previously, in many instances enrollees are involved with well planned programs that have been in existence for some time; others are concerned with programs essentially in the startup phase.

Scheduling Lessons

It appears that most enrollees schedule lessons on a once or twice weekly basis as recommended in the training package. Some report that they do not dare to given classes more than once per week because of distances of travel and the fact that students are volunteers and would not contribute more time than that. Others with the same situations report no difficulty in giving courses twice per week. Still others have developed unique scheduling procedures to accommodate their particular programs. Some of these are discussed below.

One state gives all training at a central location. Students attend the course for a two-week period and are housed at the training facility. The course has been changed considerably from the original basic training program and includes some 90 hours of daytime and evening sessions. The enrollee responsible for training reported that the scheduling worked well and that his students went away "exhausted but happy."

In two other instances, enrollees report giving courses on a solid two-week basis. In one instance, two cities in a state were changing responsibility for emergency medical care services and needed individuals trained

quickly. The success of the program was not reported. In another instance, an enrollee reported running courses on a two-week basis and admitted that it was "pretty grim."

Where distances of travel are great, enrollees have made use of weekends to ease scheduling of lessons. In one instance, an enrollee reports giving courses Friday evening and all day Saturday. Another enrollee reports giving 8-hour sessions on Saturday and Sunday. Enrollees report that the use of weekends permits students to gain maximum time for the travel involved.

Program Changes and Accomplishments

In addition to adapting scheduling to local conditions, enrollees report changes in course coverage as well as means of implementing training. In one instance, an enrollee reported that his program started in 1969 using the DOT guidelines but the program has changed considerably since and they now have refined all lesson plans or developed new ones to make them responsive to their needs. They have added 8 hours of anatomy and physiology to the course. The enrollee reports that they have an excellent hospital but few cases; therefore, they have developed very realistic mock runs--there is no in-hospital training.

Other enrollees report adding time for anatomy and physiology, adding a lesson on loading a CPR patient, and a lesson on IV's. One enrollee (associated with a junior college) reports regular courses each semester on both basic and advanced training.

Two enrollees report developing video tapes for medical subjects and other lessons that they feel are better taught by use of film, for example, phases of an ambulance call and procedures in the hospital emergency room. One other enrollee has requested his state planning authority to prepare video tapes for medical subjects. Enrollees report that video tapes assure consistency of coverage and can be used in areas where no physicians are available for teaching. One enrollee reported doing a study of the efficiency of video tape as opposed to "live" teaching and found no differences where there was a good moderator to lead the discussion after presentation of the tapes.

Enrollees report use of the lay coordinator to assist the physician instructor. In most cases, these individuals handle administrative aspects of the course, teach non-medical subjects, handle practice sessions and do all testing. One state official reports that he has 31 such lay coordinators;

his goal is 50. In one state, the lay instructors have formed their own association; they hold meetings to discuss and review their problems--they are currently developing student workbooks for the course as well as lesson plan supplements that they feel are needed.

One state reports that they have trained nine lay instructors to teach the emergency care course. These individuals have received 200 hours of intensive training at a state college of medicine.

One enrollee reports being very strict about course procedures. Students are allowed to miss only one class and must be prompt at their twice-weekly meetings. Tests are standardized and difficult; security is good. He stated that he was concerned at first that they were being too rigid. However, he learned that students appreciated it--they seemed to realize that they were not getting something for nothing and he felt that they consequently worked harder.

Problems and Special Interests

In the telephone conversations, enrollees were asked to indicate what problems they have in their training programs or areas in which they feel they need help. Three enrollees emphatically reported that they had no problems. Information given by the other enrollees is discussed below.

Five enrollees expressed problems related to instructors. Two of these report problems in getting physicians to teach medical subjects; both expressed the importance of having the state medical society behind the program when physicians are required to donate their time. As stated previously, one enrollee expects the state to develop video tapes to be used in rural areas where there are no physicians available for training. One enrollee reports that he has difficulty getting physician instructors to communicate at the layman's level. Another enrollee uses lay instructors and feels that they communicate better with the students; however, his lay instructors have difficulty scheduling in-hospital training time for their students--apparently the hospitals are not as receptive to the lay instructor as to the physician.

One enrollee reports a problem with funding; no courses have been given in her area since last July because of lack of funds. Other enrollees report problems with funding and many use donated time from physician instructors. Funds also are a problem in terms of purchasing films, slides and other training aids (e.g., resuscitation manikins). These are typically expensive and in some cases the state agency will purchase only one set; they therefore have the problem of transporting the materials over the state to the various courses.

Two enrollees report that testing is a major problem--particularly the area of developing written tests. One reported that he has asked his state planning agency to develop several thousand questions from which he might choose items for his courses. Another enrollee considers written test items to be one of his most difficult problems. An additional enrollee reported using a pretest for a course that had a limited enrollment. He reported testing problems with individuals who were competent EMT's but were not test oriented.

Other problems reported by enrollees included getting EMT's to improve their self-opinion, distances of travel that prohibit efficient scheduling of courses, and the length of the course. The last individual wanted to know how he could segment the course. He felt the course was too long and he was concerned about the attrition he might get from a group of volunteers (he has just started a training course). He felt that, if he could divide the course into smaller segments, the attrition would be less.

Five enrollees expressed interest in advanced training. State legislatures are currently enacting laws that permit EMT's to accomplish more than what is taught under the basic training program. These enrollees feel the need to implement advanced training as soon as lesson plans are available. Two enrollees expressed the need to implement refresher training.

Informal discussions with enrollees in these telephone calls confirmed the previously mentioned facts that enrollees in general felt the instructor training institutes were well done. Those with teaching responsibilities were especially impressed with what they had learned. The major appreciation of those with course coordinating and planning responsibilities appeared to be the opportunity to talk to other people with problems similar to theirs and to find out how other individuals are handling their EMT training problems.

Summary Comments

Most programs which use the NHTSA curriculum have been started within the last year and a half. Some enrollees are associated with ongoing programs and some are essentially in the startup phase. Although lessons typically are scheduled once or twice per week, some enrollees have used unique lesson scheduling to solve their local travel problems. These include giving the course in a two-week session and using weekends to maximize training time for a specified amount of travel. Some enrollees have varied their programs by adding specific lessons or by video taping medical lessons to standardize coverage and to eliminate the need for physician instructors in remote areas. The only major problem expressed related to obtaining instructors--particularly physicians. Also mentioned as problems were funding and the difficulty in developing written tests.

APPENDICES

A. Forms Completed by Enrollees

B. Enrollee Roster

C. Lesson Outlines

D. NHTSA Curriculum Material Summaries

APPENDIX A

This appendix contains forms completed by enrollees prior to and during institute attendance. The forms included are:

- NHTSA Enrollment Form (pp. A-2 and A-3)--a form designed to obtain information on the enrollee and his training program. The form was completed by the enrollee and mailed to the contractor prior to formal enrollment.

- Contractor Memorandum to Enrollees (pp. A-4 through A-7)--this memorandum was mailed to enrollees prior to institute attendance (the one included is for the San Mateo institute; those for other institutes were similar). It explained the purpose of the institutes, the date and place of the institute and procedures for lodgings, transportation and reimbursement (reimbursement procedures were subsequently changed: see p. A-9). The tear-off sheet was completed by enrollees and mailed to the contractor as confirmation of intention to attend the institute.

- Registration Form (p. A-8)--this form was completed the first day of the institute to determine when and where follow-up services might be required if on-site services were subsequently provided during the enrollee's first solo EMT course.

- Reimbursement Form (p. A-9)--this form permitted enrollees to itemize their institute expenses.

- Institute Evaluation (pp. A-10 and A-11)--on this form enrollees expressed their opinions about the value of the institute and means of improving future institutes.

NHTSA ENROLLMENT FORM

INSTRUCTIONS: Items represent information which is essential to the completion of institute planning. Please complete and mail in the attached envelope at the earliest possible date. You will be informed by the organization conducting the institute regarding the location, date, etc.

Enrollee ___ of 75

_____
State

INSTRUCTOR-TRAINING INSTITUTE:

- [ ] Accident Investigation
- [ ] Alcohol Breath Examination
- [ ] Emergency Medical Technician-Ambulance
- [ ] Driver License Examination

INFORMATION on STATE/COMMUNITY TRAINING COURSE:

Estimated number of State/community personnel to be trained in period Dept. 1971 - June 1972 (Number) _____

Classes to be conducted:

- [ ] On-the-job or within agency
- [ ] Hospital
- [ ] University or junior college
- [ ] Other (Describe);

_____

Source of financial support:

- [ ] Highway Safety Act - Sec. 402 and State/Community
- [ ] Vocational Education Act and State/Community
- [ ] Other (Describe)

_____

Nature of curriculum materials, lesson plans, student guides, etc., previously used (Describe):

_____

_____

_____

Will probably use curriculum material developed by NHTSA:

[ ] Yes [ ] No

Comment: _____

General Comment on State/Community training course:

_____

_____

_____

INFORMATION on PREFERRED INSTITUTE DATES:

Rank dates in order of preference:

( ) No preference

Week Beginning:

September	October	November	December
( ) 5	( ) 3	( ) 7	( ) 5
( ) 12	( ) 10	( ) 14	( ) 12
( ) 19	( ) 17	( ) 21	( ) 19
( ) 26	( ) 24	( ) 28	( ) 26
	( ) 31		

NHTSA ENROLLMENT FORM

INFORMATION on INSTRUCTOR-TRAINING ENROLLEE:

Job Title

_____

Employing Agency

_____

Nature of training responsibility as related to above courses during period Sept. 1971 - June 1972

- ☐ Instructor
- ☐ Other (Describe):

_____

_____

_____

Formal education of instructor-training enrollee

- ☐ Less than High School
- ☐ High School
- ☐ Associate Degree
- ☐ Bachelor or Postgraduate
- ☐ Other (Describe):

_____

Job Experience

- ☐ Accident Investigation _____ (years)
- ☐ Alcohol Breath Examination _____ (years)
- ☐ Emergency Medical-Ambulance _____ (years)
- ☐ Driver License Examination _____ (years)
- ☐ Other (Describe):

_____

_____

Teaching Experience

- ☐ None
- ☐ Other (Describe):

_____

_____

NAME of ENROLLEE:

_____

Business Address:

_____

Telephone:

_____

NAME of ALTERNATE:

_____

DUNLAP and ASSOCIATES, INC.

EXECUTIVE OFFICES

ONE PARKLAND DRIVE, DARIEN, CONN. 06820 • 203-655-3971

MEMORANDUM

DATE: 1 October 1971

TO: Attendees, EMT Instructor Training Institutes

FROM: Arlene M. Cleven
Dunlap and Associates, Inc.

SUBJECT: Institute Arrangements

Date and Place of Institute

A place has been reserved for you to attend the EMT Instructor Training Institute being given in San Mateo, California, from November 15 through November 19, 1971. This is one of five such regional institutes being given throughout the United States. The College of San Mateo is serving as host for the Institute.

The Institute will be conducted daily from 8:30 a.m. to 4:00 p.m. Classes will meet in a conference room of the Villa Hotel, San Mateo, California.

Lodgings

A block of rooms has been reserved at the Villa Hotel for Institute attendees. The cost of single accommodations is $14.00 per day. If you wish to stay at the hotel, please make your own reservations (or those of your alternate) by contacting Florence Dellos, Villa Hotel, 4060 South El Camino Real, San Mateo, California 94403, telephone: 415 - 341-3456, prior to November 10, 1971. When making your reservations, indicate that you are an Institute Attendee.

Air Travel Facilities

Those traveling by air will arrive at San Francisco International Airport. There is a direct phone from the airport to the Villa Hotel. Attendees contacting the hotel by this phone will be provided with free transportation to the hotel.

Institute Coverage

The purpose of the Institutes is to train instructors to teach the Department of Transportation Basic Training Program for Emergency Medical Technician--Ambulance. The course emphasis, therefore, is on the development of teaching skills as opposed to emergency care skills since it is assumed that all attendees are knowledgeable in emergency medical care. Topical course coverage includes the following:

- Overview of the EMT course and course documents
- Training principles of the EMT course
- Course planning and management
- The teaching-learning process
- Utilizing the lecture/discussion technique
- Teaching techniques for skill development
- Utilizing instructional aids
- Evaluating knowledge
- Evaluating skills
- Means of applying the Institute principles in briefing course coordinators, other course instructors and instructor aides
- Practice teaching workshops utilizing actual lesson plans from the Department of Transportation basic EMT training program

The Institute will be taught by qualified university educators from Central Connecticut State College. These educators have extensive experience in teacher training.

Reimbursement Policies

Reimbursement policies pertinent to Institute attendees are given below:

Transportation

Air--economy class, supported by receipt

Personal car--$.10/mile plus tolls

Subsistence

Overnight supported by hotel bills at rate of $24.00 per day, maximum $120.00

Other--$5.00 per day, maximum $25.00

Forms for reimbursement will be available at the Institute; each attendee will submit a travel voucher at the end of the Institute.

Attendance Confirmation

Kindly complete the attached form and return it in the enclosed envelope prior to October 22, 1971.

AMC:jcv

Name: _____

State: _____

I will attend the scheduled Institute.

I am unable to attend the scheduled Institute. The following individual will attend in my place.

Name: _____

Title: _____

Address: _____

_____

Phone: _____

REGISTRATION FORM

EMT INSTRUCTOR TRAINING INSTITUTE

Name: _____

Title: _____

Address: _____

_____

_____

_____

Telephone: _____

Role in EMT Program: _____

Will you be initiating/teaching EMT courses in the near future?

_____Yes _____No

If "yes," estimated date and place of next course:

Date: _____

Place: _____

_____

_____

_____

DA 569

DUNLAP AND ASSOCIATES, INC.

REIMBURSEMENT FORM
EMT INSTRUCTOR TRAINING INSTITUTE

Name:_____
Address:_____
_____
_____

Dates: from_____ to_____

AIR TRAVEL

Home to Airport:	Limousine/taxi	_____
	Car (___ miles at 10¢/mile)	_____
Air Economy:	(supported by receipt	_____
Airport to Hotel:	Limousine/taxi	_____
Hotel to Airport:	Limousine/taxi	_____
Airport to Home	Limousine/taxi	_____
	Car (___ miles at 10¢/mile)	_____

GROUND TRAVEL

Home to Hotel	(___ miles at 10¢/mile)	_____
Hotel to Home	(___ miles at 10¢/mile)	_____
Tolls		_____

SUBSISTENCE

Hotel:	Single room, supported by receipt (max.: 5 days)	_____
	Plus $10.00 per day (max.: 5 days)	_____
	TOTAL:	_____

LOCAL COMMUTERS ONLY:

Subsistence: $2.50 per day (max.: 5 days)	_____
To and from classes: ____ miles at 10¢ per mile	_____
TOTAL:	_____

_____
(signature)

APPROVED: _____
Institute Instructor

_____
A. M. Cleven

INSTITUTE EVALUATION

The purpose of this Institute was to train you to teach the DOT Basic Training Program for Emergency Medical Technician--Ambulance. The emphasis was on the development of teaching skills as opposed to emergency care skills. In order to improve this series of Institutes as well as similar Institutes planned for other highway safety programs, we would appreciate the benefit of your comments and recommendations.

Please make comments and recommendations as appropriate in the following areas:

Institute coverage (For example: What units of instruction were particularly helpful? Did some units appear unnecessary? Would you like to see other topics covered? Would you prefer more/less time devoted to some topics?)

Institute value (For example: Did the Institute adequately prepare you for the role of instructor? In what way could the Institute be made more useful?)

Other comments and recommendations

Name (optional)_____

APPENDIX B

ENROLLEE ROSTER

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Susan W. Teal, Coordinator, EMS
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Fire Department
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APPENDIX C

LESSON OUTLINES

This appendix contains the lesson outlines used by instructors at each of the five institutes. It includes the complete document (title page, foreword, schedule, outlines for Units 1 through 22 and appendices) as it was submitted to enrollees as part of the institute follow-on services. Pages have been renumbered to avoid confusion with other sections of this report.

Emergency Medical Technician

Instructor Training Institute

LESSON OUTLINES

Dunlap and Associates, Inc.
Darien, Connecticut 06820

February 1972
Contract DOT-HS-099-1-141

Prepared for:

U. S. Department of Transportation
National Highway Traffic Safety Administration

The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration

FOREWORD

The U.S. Department of Transportation, National Highway Traffic Safety Administration recently supported the development of a basic training program for Emergency Medical Technician--Ambulance. The detailed Instructor's Lesson Plans and Course Guide, prepared by Dunlap and Associates, Inc., were submitted to the states as guidelines in implementing the training requirements specified by Highway Safety Program Standard No. 11.

As part of its continuing efforts in behalf of highway safety, NHTSA sponsored the conduct of five regional instructor training institutes in the fall of 1971. The purpose of these institutes was to train individuals to teach the Basic Training Program for Emergency Medical Technician--Ambulance. In all, 64 individuals completed the five-day institute.

This document contains the course schedule and outlines of instruction given at each of the institutes. An appendix includes handouts given to enrollees at the various institutes. These materials were prepared by Dunlap and Associates, Inc., in collaboration with Central Connecticut State College, New Britain, Connecticut. The course was taught by educators from Central Connecticut State College.

The dates, sites and colleges that served as hosts for the institutes are as follows:

- October 11-15: New Britain, Connecticut
  Host: Central Connecticut State College
- October 25-29: Lansing, Michigan
  Host: Lansing Community College
- November 1-5: Stone Mountain, Georgia
  Host: DeKalb College, Clarkston, Georgia
- November 8-12: Kansas City, Missouri
  Host: Metropolitan Junior College District
- November 15-19: San Mateo, California
  Host: College of San Mateo

The project was directed by Miss Arlene Cleven of Dunlap and Associates, Inc. Mr. Joseph Fucigna, Executive Vice President of the Corporation, served as Responsible Corporate Officer. Educators from Central Connecticut State College who taught the various institutes were Dr. Joseph Duffy, Dr. Philip Masley, Dr. John Chow, Dr. Andrew Baron, Dr. Raymond Ross and Mr. George Barnhardt.

INSTITUTE SCHEDULE

AND

OUTLINES

COURSE SCHEDULE

EMERGENCY MEDICAL TECHNICIAN INSTRUCTOR TRAINING INSTITUTE

A.M. 8:30	1. Institute Overview 2. The EMT Course and Course Documents 3. Course Requirements	8. Workshop: Teaching Information Lessons (3 enrollees) 9. Instructional Aids	12. Workshop: Demonstrating Skills (3 enrollees) 13. Course Planning and Management	16. Workshop: Skill Practice and Evaluation (3 enrollees) 17. Developing Written Tests	20. Workshop: Instructor Training Course Teaching Principles 21. Application of Principles Learned at Institute
11:30					
P.M. 1:00	4. Teaching-Learning Process 5. Instructor's Lesson Plans 6. Utilizing the Lecture/Discussion Technique 7. Workshop Planning	10. Workshop: Teaching Information Lessons (2 enrollees) 11. How to Teach Skills	14. Workshop: Demonstrating Skills (2 enrollees) 15. Conducting Practice, Test and Evaluation Lessons	18. Workshop: Skill Practice and Evaluation (2 enrollees) 19. Workshop: Developing Written Tests	22. Institute Review, Evaluation, and Graduation (including Reimbursement Forms Completion)
4:00					

Time: 30-45 min.

UNIT 1

INSTITUTE OVERVIEW

Objectives: Provide the enrollee with an overview of the objectives, scope and procedures of the Emergency Medical Technician Instructor Training Institute

Requirements: Institute schedule (one for each enrollee)
Registration form (one for each enrollee)
Department of Transportation registration form

WELCOMING REMARKS

1. Teacher introduction
2. Enrollee welcome

ADMINISTRATIVE MATTERS

(Distribute registration forms)

1. Enrollee completion of registration cards
2. Distribution of DOT registration forms to enrollees who have previously not completed the form--ask to complete and return prior to end of Institute

INSTITUTE PURPOSE

1. The purpose of the Institute is to train enrollee to teach the Department of Transportation Basic Training Program for Emergency Medical Technician--Ambulance.
2. The emphasis of the Institute is on the development of teaching skills as opposed to emergency care skills since it is assumed that all enrollees are knowledgeable in emergency medical care.
3. The Department of Transportation is sponsoring the conduct of five such Instructor Training Institutes:
   a. They are being given this Fall in various regions of the U.S.
   b. This is the _____(1st, 2nd, etc.) of such institutes.
   c. Others have been (will be) given in _____, _____, _____, and _____. (Connecticut, Georgia, Michigan, Missouri, California)

4. Similar institutes are being given for all 16 highway safety programs:

   a. Instructor training institutes for emergency medical technician and driver license examiner are being given this Fall.

   b. Institutes for breath examiner specialist and accident site investigator are scheduled for the first of the year.

   c. Institutes for the remaining eight programs are expected to follow.

   Thus, this is a broad exercise in instructor training for the Department of Transportation highway safety program.

ENROLLEE IDENTIFICATION

1. Enrollee introduction. Ask each to give the following information:

   a. Name
   b. Title
   c. State represented
   d. Role in his State's emergency medical care program

2. Recognition of the variation in enrollee roles and responsibilities; that is, (include as appropriate):

   a. Some have indicated they will be instructors.

   b. Some have indicated their role will primarily be that of coordination.

   c. Some have indicated they will perform in both roles.

   d. Some have indicated _____(other, as appropriate).

3. Although primarily a teacher training institute, an attempt will be made to satisfy the needs of all enrollees. Therefore, in addition to techniques for teaching the course, attention will be given to course organization and management and to methods for applying what they have learned in the institute in providing briefings to other EMT course personnel within their States.

INSTITUTE SCHEDULE

(Distribute Institute schedule)

1. Review the Institute schedule, indicating for each topical unit of the course:

   a. The reason for its inclusion relative to EMT training

   b. What the teacher trainer will attempt to accomplish

   c. What the enrollee will accomplish

INSTITUTE PROCEDURES AND FACILITIES

1. Procedures and facilities relative to the Institute; that is:

   a. Rest breaks
   b. Lunch
   c. Reimbursement--form to be filled out on last day of course
   d. Other, as appropriate

INSTITUTE CREDIT

1. Explanation of college credit available for the Institute, including procedures and costs involved for those interested.

2. Explanation of how credits, costs, and procedures vary depending on whether the credit is desired from CCSC or other host institution.

QUESTIONS

1. Questions from the class regarding Institute coverage and procedures.

Time: 1 hr.

UNIT 2

THE EMT COURSE AND COURSE DOCUMENTS

Objectives: Familiarize enrollees with:

- Broad objectives of the EMT course
- The EMT career structure
- Course content
- Course emphasis
- Student requirements for course completion
- Course documents

Requirements: Course documents (one for each enrollee):

- Concepts and Recommendations
- Course Guide and Course Coordinator Orientation Program
- Instructor's Lesson Plans
- Emergency Care and Transportation of the Sick and Injured

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction

BROAD OBJECTIVES OF EMT COURSE

1. The purposes of the EMT training program are:

   a. Develop or upgrade skills of all individuals concerned with emergency medical care--ambulance

   b. Standardize emergency medical care procedures and training

   c. Provide a first step in an EMT career development pattern

2. As a result of the preceding aims, the broad objectives of the course are to:

   a. Teach EMTs their overall roles and responsibilities in performing both emergency care and operational aspects of their jobs

   b. Develop EMT skill in diagnosis and emergency care treatment procedures, short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician

   c. Develop EMT skill in the use and care of all equipment required for his job

EMT CAREER STRUCTURE

1. As stated previously, the basic course as briefly described is considered to be the first phase of training in the EMT career structure

2. Refresher training is considered to be required at least every two years in order to assure that EMTs maintain skills and become up-to-date on the newest developments in emergency medical care

   Note: Explain that the Department of Transportation has recently supported the development of a refresher course for EMTs. This course was completed in the Fall of 1970 and includes a minimum of 20 hours of training. Copies of the course are available through the Government Printing Office (Course Guide, GPO Order No. 420-738 (35¢), Instructor's Lesson Plans, GPO Order No. 420-625 ($1.50).

3. The Department of Transportation is currently supporting the development of an advanced training program for EMTs. Such training may include, for example, the use of telemetry and such advanced techniques as defibrillation and administration of medications in the field upon voice command of a physician.

4. Therefore, the concept of a true paramedical career structure for the EMT is in the process of development.

COURSE CONTENT

1. Contents of the course were based on:

   a. The Department of Transportation Highway Safety Program Standard, and

   b. Guidelines and recommendations for training ambulance personnel, prepared by the Committee on Emergency Medical Services of the National Academy of Sciences - National Research Council

2. The course includes 25 lessons involving 71 hours of classroom training plus 10 hours of in-hospital observation and training for a total of 81 hours.

(Display lesson titles)

3. Details of course organization and general coverage of each lesson. In summary, explain that:

   a. The first lesson sets the scene for the course.
   b. It is followed by life threatening emergencies.
   c. These lessons are followed by other common emergencies encountered by EMTs.
   d. Lessons are included on lifting and moving patients and on extrication from automobiles.
   e. One lesson is devoted to operational aspects of the job.
   f. Two lessons provide for integration of knowledge taught in the course.
   g. There are four interleaved practice, test, and evaluation lessons.
   h. There is a final written test of knowledge and a final evaluation of skills.

4. Prior to certification of course completion, 10 hours of in-hospital observation and training are required. It is recommended that 2 consecutive hours be spent in each of the following hospital departments:

   a. Emergency
   b. Surgical
   c. Intensive care
   d. Obstetrics
   e. Psychiatric

COURSE EMPHASIS

1. Principles affecting design of the course:

   a. The course emphasizes the practical aspects of emergency care; that is, the development of student skill in symptom recognition and emergency care.

   b. Theory is minimized.

   c. Heavy reliance is placed on demonstration and student practice as a teaching method.

   d. Each lesson provides for practice of specific skills covered in the lesson, as appropriate.

e. If no new skills are taught in a lesson, additional practice is provided on skills previously taught, or the students are given a verbal drill on the new knowledge covered.

f. Interleaved practice, test, and evaluation lessons are designed to assure attainment of proficiency levels in all skills as well as to evaluate student knowledge achievement.

g. Certain skills considered critical are overpracticed; thus, the critical skill of cardiopulmonary resuscitation is practiced or evaluated in six different lessons of the course.

STUDENT REQUIREMENTS FOR COURSE COMPLETION

1. Criteria by which all EMTs will be evaluated prior to being certified as having successfully completed the course:

   a. Skills
   b. Knowledge
   c. Personal attitude
   d. Personal appearance
   e. Attendance
   f. In-hospital training

EMT COURSE DOCUMENTS

(Distribute EMT documents)

1. <u>Concepts and Recommendations</u>

   a. It is basically a "background" document.

   b. As such, it describes the concept of an EMT career structure, the procedures involved in the development and pilot testing of the basic EMT course, and requirements for basic, refresher, and advanced EMT training.

   c. It is provided for the enrollee's general information and will not be discussed further in this Institute.

2. Course Guide and Course Coordinator Orientation Program

a. The first part (Course Guide) was prepared as an aid in planning, organizing, and managing the basic EMT course.

1) As such, it contains a detailed outline of the course, prerequisites for students and instructors, suggested scheduling and class size, requirements for facilities, training aids and reference material, and guidelines for conducting the course.

2) It is essentially a course planning document and will be discussed as appropriate in various sessions of this Institute.

b. The second part (Course Coordinator Orientation Program) was prepared to aid State officials in orienting individuals who will be responsible for course supervision.

1) It contains a suggested program outline for such a course.

2) It will be referred to later in the session on "Course Planning and Management."

3. Instructor's Lesson Plans

a. It was prepared to aid the instructor in the day-to-day conduct of the course.

b. As such, it includes:

1) Introductory material describing:
   a) Objectives and scope of the course
   b) Required texts and supplementary references
   c) Hints on using the lesson plans
   d) Instructor qualifications and responsibilities
   e) Student requirements for course completion

2) Detailed plans for conducting each of the 25 course lessons

3) Appendices containing:
   a) Guidance for developing test materials and for conducting practice, test, and evaluation lessons
   b) Guidance for effective teaching
   c) Supplementary references for the instructor
   d) Samples of forms to be handed out to students in certain lessons of the course

c. It is the basic instructor training document, and will be used throughout the Instructor Training Institute.

4. Emergency Care and Transportation of the Sick and Injured

   a. It was prepared by the American Academy of Orthopaedic Surgeons.

   b. Although there are other texts on emergency care, this one was the most complete and up-to-date reference that was identified at the time the lesson plans were developed.

   c. It is, therefore, the recommended student and instructor reference for the course.

   d. In general, lesson plans are keyed to the manual contents.

   e. The document will be used throughout the Instructor Training Institute as the basic reference source for the Instructor's Lesson Plans.

SUMMARY AND QUESTIONS

1. Purpose of session--provide enrollees with a broad familiarity of the EMT training program and the training documents available for the program.

2. Class questions or comments on the unit of instruction.

Time: 30-45 min.

UNIT 3

EMT COURSE REQUIREMENTS

Objectives: Review with the class the EMT course requirements for:

- Personnel
- Facilities
- Materials and equipment
- Training aids
- References

Requirements: Lesson titles and reading assignments (One for each enrollee)

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction

2. Indication to enrollee that he will find details for this session in the Course Guide

COURSE PERSONNEL

1. It is expected that three categories of personnel will be required for supervising and teaching the basic EMT course: a course coordinator, course instructors, and instructor aids:

   a. Course coordinator--the individual with overall supervisory responsibility for the course and responsibility for certifying that individual students have successfully completed the course. Since he will have overall responsibility, it is recommended that he be a physician knowledgeable in the area of emergency care. Depending on his desires and workload, he may be assisted by another individual from the State or local community who would be responsible for the administrative aspects of the course.

   b. Instructors--the individuals responsible for teaching one or more lessons of the course. In general, it is recommended that medical lessons be taught by physicians and other lessons by specialists in the given topic area (e.g., a lawyer to teach legal aspects) or by experienced ambulance personnel.

VISUAL AIDS

1. Films

   a. Two films have been recommended for the course:

      1) "Pulse of Life"--available on loan from the local American Heart Association

      2) "Emergency Childbirth" (Medical Self-Help Training Course Lesson 11, U.S. Public Health Service)--available through local Office of Civil Defense

   b. Instructor should feel free to utilize other films available to him if he feels such films will increase the effectiveness of his presentation.

2. Slides

   a. No specific slide series was recommended for the course since, at the time the course was developed, there was no source of supply that would satisfy the unique requirements of the course.

   b. Since then, the American Academy of Orthopaedic Surgeons has prepared a slide series which includes illustrations from the basic manual (some 1,500 color slides).

   c. Specific recommendations for slides, therefore, have been limited to two series on cardiopulmonary resuscitation--both available on loan through the local American Heart Association.

   d. The enrollee is advised that hospitals (particularly nurse training schools) and schools (anatomy and physiology courses, emergency health courses) are sources of slide materials.

   e. In the lesson plans, asterisks have been used to indicate where a slide or other visual aid would be particularly desirable.

3. Student handouts

(Hand out Lesson Title and Reading Assignment)

a. Three student handouts have been prepared and are included in Appendix D to the lesson plans. They are:

1) Lesson titles and reading assignments--to be given to each student in Lesson 1. (Slight corrections due to change in manual after lesson plans went to press; correct handout provided.)

2) Functions of the EMT--to be given to each student in Lesson 1.

3) Field situations--to be given to each student in Lesson 23.

REFERENCES

1. The basic reference for the course is the AAOS manual as stated previously.

2. Supplementary references have also been provided for instructors of certain lessons.

a. These references are included in the requirements section of each lesson plan.

b. They are summarized in Appendix C of the Instructor's Lesson Plans.

SUMMARY AND QUESTIONS

1. Purpose of session--provide enrollee with broad familiarity of requirements for conducting the course.

2. Class questions or comments on the unit of instruction.

Time: 30 min.

UNIT 4

TEACHING-LEARNING PROCESS

Objectives: Identify the four major phases involved in the pre-planning and execution of the teaching-learning act and key points pertinent to each phase.

Requirements:

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction

2. Explanation that this is general introduction to the teaching-learning process; specifics will come later.

SITUATIONAL EXAMPLE

1. Establishment of situation as follows: You have been informed that a new class of EMT trainees has been formed. Fifteen people are enrolled in the class. You have been asked to be the instructor responsible for presenting the first lesson to the trainees. The topic of the first lesson is "The Emergency Medical Technician--His Role, Responsibilities, and Equipment." The first class meeting is one week from today.

2. Questions directed to group:

   a. What should be considered in getting ready for this first lesson presentation?

   b. What advance planning would you do?

3. Several ideas should evolve from group--use student ideas to lead into lesson.

3. Student handouts

(Hand out Lesson Title and Reading Assignment)

a. Three student handouts have been prepared and are included in Appendix D to the lesson plans. They are:

1) Lesson titles and reading assignments--to be given to each student in Lesson 1. (Slight corrections due to change in manual after lesson plans went to press; correct handout provided.)

2) Functions of the EMT--to be given to each student in Lesson 1.

3) Field situations--to be given to each student in Lesson 23.

REFERENCES

1. The basic reference for the course is the AAOS manual as stated previously.

2. Supplementary references have also been provided for instructors of certain lessons.

a. These references are included in the requirements section of each lesson plan.

b. They are summarized in Appendix C of the Instructor's Lesson Plans.

SUMMARY AND QUESTIONS

1. Purpose of session--provide enrollee with broad familiarity of requirements for conducting the course.

2. Class questions or comments on the unit of instruction.

Time: 30 min.

UNIT 4

TEACHING-LEARNING PROCESS

Objectives: Identify the four major phases involved in the pre-planning and execution of the teaching-learning act and key points pertinent to each phase.

Requirements:

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction

2. Explanation that this is general introduction to the teaching-learning process; specifics will come later.

SITUATIONAL EXAMPLE

1. Establishment of situation as follows: You have been informed that a new class of EMT trainees has been formed. Fifteen people are enrolled in the class. You have been asked to be the instructor responsible for presenting the first lesson to the trainees. The topic of the first lesson is "The Emergency Medical Technician--His Role, Responsibilities, and Equipment." The first class meeting is one week from today.

2. Questions directed to group:

   a. What should be considered in getting ready for this first lesson presentation?

   b. What advance planning would you do?

3. Several ideas should evolve from group--use student ideas to lead into lesson.

NEED FOR PREPLANNING OF INSTRUCTION

1. Every instructor needs to perform some planning before presenting lessons. The amount of planning and preparation necessary is dependent on the experience and background of the instructor.

   a. Two things will cause the best of instructors to fail:

      1) Not knowing his subject

      2) Failure to prepare properly for his teaching assignment

   b. Sufficient time should be devoted to preparation, even if the instructor is an expert on the subject.

   c. Instructor needs a "guide" or "map" -- a lesson plan.

   d. For the EMT course, lesson plans have been prepared as guidelines for the instructor; however, preplanning of each lesson is still required.

PHASES IN THE TEACHING-LEARNING PROCESS

1. The process of getting ready for and implementing the teaching-learning process may be examined in the context of four distinct phases:

   a. Preparation Phase - Getting the learner, the learning environment, and the teacher into a state of readiness.

   b. Presentation Phase - The teaching-learning process in action.

   c. Application Phase - Providing appropriate opportunities for the student to practice and apply this new learning.

   d. Evaluation Phase - A process for examining the degree of success of the teaching-learning experience -- basis for decisions.

2. Definition of teaching and learning:

   a. Teaching - the management of the learning environment

   b. Learning - modifications or changes in human behavior

PREPARATION PHASE

1. During this phase, the instructor must make a series of decisions or review previous decisions:

   a. Instructor readiness considerations:

      1) What are the stated objectives of the lesson?
      2) What subject matter content is included?
      3) How much review of content is needed by instructor?
      4) Is available time a limitation?
      5) How will achievement of the objectives be determined? Do tests need to be developed?

   b. Learning environment considerations:

      1) What teaching methods would be most effective?
      2) Can a variety of methods be used?
      3) What teaching aids should be used for this lesson? Where can they be obtained?
      4) Will a film need to be obtained? (Source, use date, film preview)
      5) What supplies, equipment, or materials are needed for demonstration?
      6) How will the students practice new skills or apply new knowledge?
      7) Is the classroom adequate? (Lighting, seating, ventilation, heating)
      8) How will the workplace be arranged?

   c. Student readiness considerations:

      1) How should the lesson be introduced to the class?

      2) Will the introduction help the student realize the importance of the knowledge and skills taught in the lesson?

2. The preparation phase, therefore, involves many factors and is most important to insure success of the instruction. The instructor must provide adequate time for this pre-planning phase.

PRESENTATION PHASE

1. During this phase, the instructor is in action with the student group. The instructor implements the selected methods of teaching:

   a. Shows how to do it (demonstrate)

   b. Explains how, as he demonstrates

   c. Asks questions frequently

   d. Involves the student in demonstrations or discussions

   e. Holds lecture to a minimum--discusses with students instead

   f. Uses visuals whenever appropriate

   g. Shows the object if possible; doesn't just talk about it

   h. Makes sure all can see visuals, demonstrations, chalkboard

   i. Maintains a classroom climate that is open--does not inhibit relevant communication

   j. Uses language suitable to the group--does not talk over their heads

   k. Makes eye contact with every student repeatedly

   l. Utilizes as many senses as possible in presenting--especially seeing

   m. Stands while presenting, moves about, and gestures--is dynamic and interested in the subject

   n. Has a sense of humor--interjects humor in presentation if appropriate

APPLICATION PHASE

1. The student must be given an opportunity to try out whatever has been demonstrated or explained to him. The instructor must plan appropriate activities for the student to practice and apply the new learning.

   a. Provide practice as soon as possible after new learnings have been presented.

   b. Observe the learners performing the tryout experiences.

   c. Provide assistance and correction if necessary so that the first attempt is done properly.

   d. Have students repeat task several times to increase proficiency.

2. Practice or application may be provided by:

   a. Homework assignment of problems

   b. Classroom practice of skills

   c. Classroom practice of knowledge

EVALUATION

1. The process of evaluation involves examining the total teaching-learning activity. It is <u>not</u> only testing of the student for achievement, although this is part of it.

2. Evaluating student achievement

   a. Should be based on objectives of the instruction

   b. Achievement of skills will need to be measured differently from knowledge or attitudes

   c. Attitudes are difficult to measure

   d. Devices can be constructed to assist instructor in measuring changes in these three areas of human behavior--skill, knowledge and attitude

3. Evaluating the learning environment

   a. Did the selected methods work well?

   b. Was the student practice and application appropriate and adequate?

   c. Was enough time provided for instruction and practice?

   d. Were visual aids adequate?

   e. Are additional aids needed?

   f. Was the class too large for efficient and effective instruction?

   g. Were the classroom facilities adequate?

   h. Did you have adequate supplies, materials, tools, equipment for demonstration and practice?

   i. Did the projectors, etc., work properly?

   j. Were the lesson plans helpful?
   How could they be improved?

4. Evaluating the instructor

   a. Is additional review needed for some of the lessons?

   b. Did the students frequently get bored?

   c. How can some topics be made more interesting?

   d. Can the lesson sequence be changed to increase student interest?

   e. Was "open" discussion possible?

   f. Was the class too instructor dominated?

   g. Can some presentation methods be improved?

SUMMARY AND QUESTIONS

1. Contents of session: the four major phases of pre-planning and execution of instruction, and key points pertinent to each phase.

2. Class questions or comments on this unit of instruction

Time: 30 min.

UNIT 5

INSTRUCTOR'S LESSON PLANS

Objectives: Familiarize enrollees with the overall design of a lesson plan and how the four-step process was applied within and between lessons

Requirements:

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction.

DESIGN OF THE LESSON PLANS

(Refer to actual lesson plan)

1. Each lesson plan consists of three parts:

   a. Objectives--specified here are objectives of the lesson in terms of knowledge to be developed or skills to be taught.

   b. Requirements--specified here are requirements for:

      1) Number of instructors
      2) Instructor references
      3) Materials and equipment recommended as teaching aids

   c. Outline of instruction--detailed procedures for conducting the lesson. Typical pattern:

      1) Administrative matters--taking attendance, making announcements

      2) Review of previous lesson

      3) Lecture on new material

      4) Demonstration of new skills as appropriate

5) Class practice

6) Summary of lesson

2. Estimates of both elapsed and projected times are given for two purposes:

   a. To aid the instructor in maintaining his lesson on schedule

   b. To provide a means by which the instructor can determine the emphasis to be given to a specific area. Example: since theory is minimized, time estimates for anatomy and physiology are generally short.

3. Hints to the instructor for varying his presentation and for obtaining class participation are given throughout the lesson plans.

4. As indicated in a previous session, asterisks are used to indicate where a slide or other visual aid would be desirable.

5. Enrollee is advised that the Instructor's Lesson Plans was prepared as a guidance document for the instructor. It should not be considered a rigid document. Instructor should adhere to the content of each lesson but should feel free to utilize his own style and any training aids available to him.

APPLICATION OF THE FOUR-STEP PROCESS TO THE LESSON PLANS

1. As stated previously, there are four steps in the teaching-learning process:

   a. Preparation
   b. Presentation
   c. Application
   d. Evaluation

(Use examples from lesson plans)

2. The steps have been applied both within and between lessons in the course.

a. Preparation

1) The first lesson "sets the scene" for the course by describing course objectives and scope and the roles and responsibilities of the EMT.

2) The objectives of each lesson are fully discussed prior to presenting new knowledge and skills.

3) The importance of each knowledge and skill to satisfactory performance of the EMT's job is emphasized throughout the course.

b. Presentation

1) Each lesson in which new knowledge or skills are taught utilizes a variety of techniques; that is:

a) Lecture
b) Discussion
c) Demonstration
d) Use of training aids

c. Application

1) For each lesson where new skills are taught, practice of the new skills is provided in the lesson.

2) Where no new skills are taught:

a) The student is given an opportunity to apply his knowledge through a verbal drill in which the instructor describes signs and symptoms and the student is requested to suggest what is wrong with the patient and how to care for him.

b) In some lessons where no new skills are taught, the student is given an opportunity for additional practice on skills taught in previous lessons.

c) Four intervening practice, test and evaluation lessons provide for additional skill practice.

d) Lesson 22 provides for an integration and application of knowledge learned throughout the course by a discussion of the duties and responsibilities of the EMT during various phases of an ambulance run.

e) Lesson 23 provides for integration and application of course contents by group discussion of situational examples that might be encountered by an EMT.

d. Evaluation

1) Four interleaved practice, test,and evaluation lessons

2) Final written test of knowledge

3) Final practical evaluation of skills

SUMMARY AND QUESTIONS

1. Contents of session--design of the lesson plan and application of the four steps to the lesson plans

2. Class questions or comments on the unit of instruction

Time: 30 min.

UNIT 6

UTILIZING THE LECTURE/DISCUSSION TECHNIQUE

Objectives: Provide the enrollee with hints for effectively utilizing lecture/discussion techniques in developing student knowledge

Requirements:

OBJECTIVES

1. Explanation that EMT course is designed to develop both knowledge and skill in emergency medical care

   a. Some lessons of the course are devoted completely to attainment of student knowledge.

   b. Some lessons include demonstration and student practice of skills.

   c. All lessons, whether skill or knowledge oriented, require the instructor to impart information to the class; that is, "communicate" with the class.

2. Communication of knowledge may be achieved by several means; for example:

   a. Lecture
   b. Class discussion
   c. Use of instructional aids

3. In general, it is a good principle of teaching to utilize visual aids when they will add to the effectiveness of the presentation.

4. However, there are instances where visual aids are limited, completely unavailable, or inappropriate, and the instructor must rely on his personal qualities as a teacher in effectively communicating with the class.

5. It is, therefore, the purpose of this unit of instruction to provide the instructor with hints for utilizing lecture/discussion techniques in communicating with a class.

INSTRUCTOR QUALITIES

1. Qualities of a good instructor go far beyond expert knowledge of the subject matter.

   a. He must impart this knowledge in a clear and interesting manner.

   b. He must control his students and at the same time maintain a good rapport with them.

   c. He must, in effect, communicate with the class.

2. Suggestions for the instructor include:

   a. Use language suitable to the group. Avoid complicated words where simple words will do and assure that your vocabulary is appropriate to emergency care and not to definitive care.

   b. Be so well versed in the subject matter and familiar with the lesson plan that you are able to talk directly to the class, not read to it.

   c. Do not orate or mumble. Employ interesting, earnest, conversational tones and natural personal manner. Look into the faces of your students as if you were talking to them individually. Look from one to the other and not too much at your notes and desk.

   d. Exhibit a sense of humor in some other way than by using funny stories as illustrations. Phrase your remarks, where possible, in an interesting manner.

   e. Be in control of the class at all times. Assure that all students participate,and do not allow the class to be dominated by a few vocal students.

   f. Ask questions frequently and involve students in discussions.

OBTAINING CLASS PARTICIPATION

1. The course is designed to include as much class participation as possible. The instructor should:

   a. Ask members of the class to answer specific questions.

   b. Encourage students to ask questions or make comments.

   c. Stimulate discussion by posing situational examples or opening up a student question to the entire class.

2. When asking the class a question, the instructor should direct the question to the entire class, and then either select an individual to respond or permit a student who knows the answer to respond.

   a. When questions are directed to the entire class, all individuals in the class are required to think the answer through.

   b. If the instructor selects an individual to respond, he is advised that shy students may become discouraged.

   c. On the other hand, should the instructor permit any member of the class to respond, he may find that one or two individuals dominate the class.

   d. The instructor should try both techniques and select the one that works best with his particular class.

3. The instructor should vary his questions. Examples of kinds of oral questions include those starting with the words "what," "why," "how," "is it true that," and "compare."

HINTS FOR CONDUCTING INFORMATION LESSONS

1. Suggested procedures for imparting knowledge in information lessons include:

   a. State clearly at the beginning the major topic and objective of the lesson.

   b. Begin, if possible by:

      1) Arousing some curiosity or developing a problematic attitude by means of question or problem.

      2) Giving the students some ideas of the main things to be gained from the lesson.

   c. Quickly survey the room for possible distraction, noises, and bad seating arrangements, and make appropriate adjustments, if possible.

   d. Adapt the pace of lecture method of lesson presentation to:

      1) The ability of the class to follow the lecture

      2) The relative necessity for the student's reflecting upon what has been presented

      3) The difficulty of the materials presented and the ability of the class to take notes, if notes should be taken.

   e. Cultivate a good time-sense. Avoid digression; it often serves as a distraction rather than an illustration. Keep your lesson on schedule.

   f. Above all, always keep in mind these important points:

      1) The objective of the lesson

      2) The necessity for your students to be able to understand, and,

      3) The necessity to be interesting, to be at ease, to be brief, to employ the proper pace, and to promote class participation.

SUMMARY AND QUESTIONS

1. Summary of main points brought out in lesson.

2. Class questions or comments on the unit of instruction.

Time: 1 hr.

UNIT 7

WORKSHOP PLANNING

Objectives: Inform enrollees of the procedures and assignments for the practice teaching workshops.

Requirements: Handouts--Workshop Assignments, Checklists and Practice Teaching Workshops

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OBJECTIVES

1. Brief explanation of the objectives of the unit of instruction.

PURPOSE OF WORKSHOPS

1. Provide enrollees an opportunity to apply principles previously taught by actually presenting part of one of the lesson plans.

2. Provide instructor trainer and other enrollees an opportunity to observe the principles being applied and to suggest way and means to improve the presentation.

3. Provide instructor trainers and practice teachers with a means for assessing progress.

4. Purpose is not to embarrass anyone or put them "on the spot" but rather to better prepare each enrollee for his teaching task and to benefit from the experiences which each enrollee brings to bear.

GENERAL PROCEDURES

1. Practice teaching workshops will be conducted part of each morning and afternoon on Tuesday, Wednesday and Thursday.

2. Approximately 15-minute segments have been selected from the lesson plans to permit practice in either lecturing, skill demonstration or practice and evaluation.

3. Each enrollee will select from the list the presentation he would like to make.

4. Prior to the presentation, he will review the lesson plan segment selected and relevant text material to prepare for the presentation.

5. Enrollees not making a presentation will be expected to review relevant text material as would be the case in a normal teaching situation.

6. After each presentation, there will be a 15 minute discussion period during which the instructor and enrollees will suggest ways and means that the presentation might be improved. Enrollees acting as students will be provided with a checklist of aspects of the presentation to consider.

7. In addition to the practice teaching workshops, there will be two general workshops involving all enrollees. One will be devoted to the development of written test items. The other will involve additional practice teaching of same subjects presented previously by as many individuals as time permits.

(Hand out assignment sheet)

WORKSHOP ASSIGNMENTS

1. As indicated previously, workshop assignments were selected to provide practice in lecturing, skill demonstration or conducting a skill practice and evaluation session.

2. The workshops are scheduled to permit some of the enrollees to practice what has been learned in previous sessions. For example, on Monday lecture/discussion techniques are taught. On Tuesday, the workshops will be devoted to practice in utilizing the lecture/discussion technique. Wednesday will be devoted to practice teaching skill demonstrations. Thursday will involve workshops on the conduct of skill practice and evaluation.

3. There will be three practice teaching sessions in the morning and two in the afternoon.

4. Enrollees should select from the possible areas on the assignment sheet, the one which they would prefer to present.

5. There will be five practice teaching sessions in each of the three instructional areas, i.e., lecturing, skill demonstration and skill practice. Thus, five different enrollees are required for each of the days that practice teaching sessions are conducted.

   Note: Instructor should refer to workshop assignment sheet and poll class regarding the assignment each member prefers. Identify each assignment and ask who would like to make the presentation. Select an individual and write his name next to the area. Continue this process until five have been assigned to each of the instructional areas. Review assignments to ensure everyone has an assignment and understands what it is.

PREPARATION AND PRESENTATION

1. Refer students to their assignments in the lesson plans. Emphasize it is not the entire lesson but rather a segment of the lesson requiring approximately 15 minutes of presentation.

2. Prior to the presentation, the enrollee should review the appropriate segment of the lesson plan and the relevant text material in the AAOS text. Material should be presented essentially as suggested in text and lesson plans, and in accordance with the principles presented in a prior Institute unit--modified, of course, by your own style of presentation.

3. Since each practice teaching session is only a segment of a lesson, each enrollee should preface his presentation with a brief description of the objectives to be achieved and close with a summary.

4. In preparing for the presentation, insert marginal notes in the lesson where appropriate, underline points you wish to emphasize and determine how you wish to supplement your presentation with visual aids.

5. Regarding visual aids, use should be made of the chalkboard, flip chart, or overhead projector.

6. For skill demonstration and practice, training equipment is available. Explain that for Thursday sessions, enrollees should give a brief demonstration of the skill and select one or two other enrollees to practice the skill.

   Note: Instructor should select a segment of a lesson plan and review briefly with the class what is involved in preparing to present that segment.

7. Emphasize that the purpose of the workshops is not to practice or evaluate emergency medical care skills but rather instructional skills--particularly those instructional skills which have just been taught.

DISCUSSION

1. Each presentation will be followed by a 15-minute discussion during which the instructors and enrollees will suggest, as appropriate, ways and means for improving the presentation.

(Hand out checklists)

2. Checklists have been developed for the enrollees, identifying the areas which should be considered for discussion.

3. The purpose of the discussion is not to evaluate the individual practice teaching but rather to identify ways and means to improve the presentation either through better application of the principles taught or use of other techniques enrollees have developed through experience in their local communities.

4. Explain purpose and use of evaluation reference sheets.

SUMMARY AND QUESTIONS

1. Objectives and procedures for practice teaching workshops.

2. Class comments or questions on the unit of instruction.

Time: 1-1/2 hrs.

UNIT 8

WORKSHOP: TEACHING INFORMATION LESSONS
(3 enrollees)

Objectives: Provide enrollees with an opportunity to utilize lecture/discussion techniques in teaching from segments of the lesson plans.

Requirements: Evaluation forms

OBJECTIVES

1. Brief explanation of objectives of the workshop

PROCEDURES

1. Each enrollee with a practice teaching assignment will devote approximately 15 minutes to practice teaching.

2. Other enrollees will serve as "students" during the practice teaching session.

3. Each practice teaching session will be followed by a 15-minute critique in which instructor and enrollees evaluate the presentation and suggest means for improving it, as appropriate.

Time: 1 hr.

UNIT 9

INSTRUCTIONAL AIDS

Objectives: Discuss purpose and uses of instructional aids. Discuss advantages, disadvantages and hints for effectively utilizing:

- Chalkboards and chart pads
- Prepared charts
- Slides and film strips
- Overhead transparencies
- Films
- Models

Requirements: Film: Visual Aids (Modern Training Aids, Rochester, New York)

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction

PURPOSE AND USES OF INSTRUCTIONAL AIDS

1. Instructional aids permit the instructor to appeal to both the senses of vision and hearing.

2. The combination of seeing and hearing yields more effective instruction than just hearing alone.

3. In addition to providing a means of varying presentation of subject matter, visual aids can be used to:

   a. Underscore main points--for example, using the chalkboard or a prepared flip chart to display the general principles of caring for patients with fractures and dislocations.

   b. Assist in instruction of information that is difficult to describe in words--for example, use of a skeleton to show movement of joints; use of a slide to describe functioning of the circulatory system.

   c. Provide information that would be impossible to show in a normal classroom setting--for example, use of a color slide to show the appearance of a person in shock; use of a film to show childbirth.

4. Indications of where visual aids might be helpful are given in the lesson plans. However, each individual instructor will have to make the final decision of whether or not a visual aid will be helpful to his presentation.

   a. If a visual aid is relevant to the material and serves a purpose, use it.

   b. If a visual aid is irrelevant and unnecessary, it will serve to divert the student's attention.

5. The instructor is advised that the visual aid is designed to aid the instructor not to substitute for him.

6. Visual aids should be developed around the verbal presentation; the verbal presentation should not be designed around the visual aid as is so often the case.

(Introduce and show film)

FILM ("Visual Aids")

1. Introduce, show and critique film.

GENERAL PRINCIPLES FOR USING INSTRUCTIONAL AIDS

1. All training aids to be used in the lesson should be available and ready for use before the class starts.

2. The instructor should be thoroughly familiar with the contents of all visual aids used in his presentation.

3. The instructor should know how to operate all projection equipment or should assure that there is a capable person to operate it.

4. He should assure that extra bulbs are available for projection equipment.

5. He should assure that any training aids used are visible to all members of the class.

6. When emphasizing certain points, he should talk to the class and not to the training aid.

Note: For the remainder of this unit of instruction, the enrollee should be provided with as much "hands-on" experience as possible with the training aids available at the Institute.

CHALKBOARDS AND CHART PADS

1. Chalkboards and chart pads are discussed together since their uses are similar.

2. The chalkboard is probably the best known visual aid.

   a. It is inexpensive and versatile.

   b. It permits spontaneity in presentation.

   c. If a topic is being developed with the class, items can be listed and progress recorded--for example, in developing a list of procedures that should be followed daily to assure an operationally ready ambulance.

   d. Since erasing is simple, changes can be made easily.

   e. Once material is erased, it is gone; thus sufficient time must be provided for students to copy the material if the instructor wishes it copied.

3. The chart pad usually consists of an easel to which a large pad (34" x 23") of paper can be attached. A felt tipped marker or grease pencil is best for writing on a chart pad.

   a. The chart pad is used in the same manner as the chalkboard.

   b. Since material need not be erased, pages can be turned over thus making review possible by turning back pages.

   c. Pages can be torn off and displayed in the classroom if desired.

   d. Pages can be prepared in advance--for example, a prepared list of the roles and responsibilities of the EMT.

   e. Their use in development of ideas with the class may prove difficult since it is impossible to erase and crossing out usually proves messy and distracting.

4. General hints for using chalkboards and chart pads are:

   a. Do not write and talk at the same time. If you do, you will be talking to the visual aid and not to the class.

   b. Write legibly and large enough for all to see--print if possible.

c. Write quickly so that you can give your attention to the class.

d. Try not to block anyone's view as you write.

e. When referring to items on the board or chart, use a pointer, not your arm.

f. Avoid blocking the view of the board with your body.

g. In general, remove the material when you have finished so that it will not be distracting.

PREPARED CHARTS

1. A chart is any poster or pre-prepared graphic device, such as a pre-prepared flip chart as discussed above.

2. Charts are permanent and portable and can be made of almost anything--photographs, drawings, graphs, diagrams.

3. In the EMT course, large charts could be useful for explaining the anatomy and physiology of various body systems.

4. Another example is the summary display of key points, such as the signs and symptoms of a spinal fracture.

5. Except for the fact that one does not normally write on charts, hints for effectively using charts are the same as those for using chalkboards and chart pads.

SLIDES AND FILMSTRIPS

1. Slides and filmstrip projectors project transparent pictures onto a screen. Slides are individual pictures; filmstrips are a series of pictures. Most slide projectors have remote control devices which permit slide changes as the instructor talks.

2. Charts, diagrams, pictures of all types and even on-the-scene photographs can be made into slides.

3. The instructor has been advised in several places throughout the EMT course to use slides to improve the effectiveness of his presentation.

4. Color slides are particularly helpful in introducing realism into the learning situation--for example, by showing actual or simulated patients with various illnesses/injuries.

5. The instructor is advised against having a "complete" slide series for his presentation. Slide presentations require a great deal of preparation and rehearsal. In addition, they minimize the opportunity for interaction between instructor and student.

6. When using slides:

   a. Darken the room slightly so that they can be easily seen.

   b. Use a pointer (not your hand) if you wish to refer to an image on the screen.

   c. For each slide, emphasize the area or points which you wish the student to attend to.

   d. Leave your slides on long enough for the group to study them (3-5 slides per minute). Too rapid succession of slides can be ineffective.

   e. Once you are finished with the slide, turn off the projector--the slide or projector light can be very distracting.

OVERHEAD TRANSPARENCIES

1. Although technically they are "slides," overhead transparencies are discussed separately here since they have several unique features.

2. Overhead transparencies are large slides for use with an overhead projector placed in the front of a lighted room.

   a. The image is reflected on a screen above and behind the instructor.

b. Placement of the projector allows the instructor to see the transparency and continue to face the class.

c. If the instructor wishes to point to an area of the slide, he can do so by pointing directly to the area on the transparency; he does not have to turn around.

d. The instructor can write on the transparency, using color if desired. A felt pen or special pencil can be used to add details or mark points on the transparency during projection.

e. A series of overlays can be used to "build up" or "take apart" an image.

f. The rate of presentation of information can be controlled by covering the transparency with paper or cardboard, and exposing it when desired.

3. Uses of transparencies in the EMT course would be similar to uses of posters and prepared charts; they cannot be used to show photographs.

4. As with other slides:

a. Emphasize the area or points which you wish the student to attend to.

b. Leave your slide on long enough for the group to study it.

c. Once you have finished with the slide, remove or cover it to avoid distractions due to the slide or the light.

FILMS

1. As stated previously, two films have been recommended for the EMT course--one on airway care, pulmonary resuscitation and cardiopulmonary resuscitation and one on childbirth.

2. The instructor should feel free to utilize other films available to him if he feels they will improve the effectiveness of his presentation. However, he is advised to select the film carefully in order to be certain it portrays what he wants.

3. Each film should be carefully previewed prior to use. The instructor should be certain of its contents.

4. When showing films:

   a. Introduce the film beforehand, explain what the film covers and is intended to show, let students know the specific points they should watch for.

   b. Show the film.

   c. After the film is over, discuss it in light of your objectives. Know the points you want to stress. Prepared questions help in starting the discussion. The discussion should provide the class with a better understanding of the points made in the film.

5. A general caution when using films: be sure that:

   a. The equipment is in working order before the class convenes.

   b. The projector is threaded.

   c. The screen is in place.

   d. The focus is adjusted.

   e. The sound is synchronized and adjusted.

MODELS

1. Three-dimensional models can be useful in showing the interrelationship of parts of the body.

2. As stated previously, a skeleton can be useful in explaining the skeletal structure, particularly the movement of joints.

3. A two-dimensional model is available which shows how the tongue can block the air passage in an unconscious patient.

4. Use of such models, if available, can add realism to the learning situation.

SUMMARY AND QUESTIONS

1. Contents of session--hints for selecting and using instructional aids:

   a. Be completely familiar with the aids, equipment and their use.

   b. Be certain you can operate or use the aid correctly and without problems; practice using it until you are confident and at ease.

   c. Use only a few pertinent aids; too many aids will be ineffective.

   d. Arrange aids so that everyone can see and/or hear; get to the class in sufficient time to set up your aids.

   e. Be certain the aid is functioning correctly.

   f. Don't let the aid dominate or interfere with your presentation.

   g. When possible, use a variety of aids; adults respond to a variety of teaching methods.

   h. Show and use the aid at the proper time.

   i. Remove or turn off the aid after you have finished with it.

   j. Speak to the class, not the aid.

   Properly used communication aids will add to a presentation. Incorrectly used, they will be distracting.

2. Class questions or comments on the unit of instruction.

Time: 1 hr.

UNIT 10

WORKSHOP: TEACHING INFORMATION LESSONS
(2 enrollees)

Objectives: Provide enrollees with an opportunity to utilize lecture/discussion techniques in teaching from segments of the lesson plans.

Requirements: Evaluation forms

OBJECTIVES

1. Brief explanation of objectives of the workshop

PROCEDURES

1. Each enrollee with a practice teaching assignment will devote approximately 15 minutes to practice teaching.

2. Other enrollees will serve as "students" during the practice teaching session.

3. Each practice teaching session will be followed by a 15-minute critique in which instructor and enrollees evaluate the presentation and suggest means for improving it, as appropriate.

Time: 1 hr.

UNIT 11

HOW TO TEACH SKILLS

Objectives: Teach enrollees the basics of good practices in teaching skills

Requirements:

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction.

REVIEW OF COURSE EMPHASIS

1. Course emphasizes practical aspects of emergency care as opposed to theory

2. Because of this emphasis, heavy reliance is placed on demonstration and individual student practice

BASICS OF TEACHING SKILLS

1. Most lessons introduce new skills by:

   a. A brief discussion of the need for the skill
   b. A brief discussion of the pertinent background, that is, anatomy and physiology
   c. Pertinent signs and symptoms
   d. Precautions as appropriate
   e. Description and demonstration of the skill by the instructor
   f. Practice of the skill by the student in small groups

2. The first four items listed above set the scene for the skill and, in a sense, are similar to information lessons, that is, they use techniques of:

   a. Lecture
   b. Discussion
   c. Visual aids
      Etc.

3. The last two provide the basis for student precision in performing the skill.

MATERIALS AND EQUIPMENT

1. The basic materials and equipment are the actual emergency care materials with which the EMT will be working in the performance of his job.

2. In addition, use is made of life-like manikins where it is impossible or impractical to demonstrate or practice a skill on other members of the class.

3. It should be emphasized that demonstration and practice on live healthy humans and on manikins provide an unrealistic setting. It is hoped that providing sufficient practice in small groups as proposed in this course will facilitate transfer of the skill to an actual needy patient.

4. It might be noted that moulages could be used if available to increase the apparent "realism" of the classroom setting.

5. Only one film has been shown in connection with demonstration of a skill--"Pulse of Life." It was included to show students airway care, pulmonary resuscitation, and cardiopulmonary resuscitation in realistic settings.

6. The other film recommended for the course, "Emergency Childbirth" also shows a skill. This skill, however, was not so classified for this course since there is no practical way in the classroom setting to demonstrate proficiency in delivery of the newborn.

HOW TO DEMONSTRATE SKILLS

1. Elements of a good demonstration

   a. Be prepared

      1) Have all equipment and supplies ready
      2) Know each step you want to explain and emphasize, that is, "have a lesson plan" for skill demonstration

   b. Explain each step or process as you proceed. Tell the "why" as well as the "how."

   c. Emphasize key points and precautions.

2. Course design

   a. The course is designed for the lead instructor to give the demonstration first to the whole group.

   b. When the group divides into small practice groups, the instructor of such groups should redemonstrate the skill as necessary in order that students will have the opportunity to see skills from the angle they will be performing them.

SKILL PRACTICE

1. As stated previously, practice should be provided in small groups.

2. Those not working directly with equipment should observe the performance of those who are.

3. Practice periods should be extended in time for slow learners if additional practice is needed.

COMPLIMENTING AND CORRECTING THE LEARNER

1. Hints for complimenting and correcting the learner

   a. Avoid criticism, if possible; attempt to show how it could be done better

   b. Compliment before you correct

   c. Let the student correct himself if possible

   d. Don't overdo correcting in the practice session; speak to the student on an individual basis if he is having difficulty with a skill

   e. Encourage the student to improve

   f. Be prompt with compliments and corrections--make them during or immediately following the performance of the skill

DEMONSTRATION OF PRINCIPLES OF THIS LESSON BY TEACHER TRAINER

1. Include the following:

   a. Brief explanation of what he will teach and why
   b. Demonstration of the skill
   c. Practice of the skill by one or two students
   d. Complimenting and correcting as necessary

CRITIQUE

1. Student and instructor critique of the demonstration

SUMMARY AND QUESTIONS

1. Summary of main points brought out in lesson

2. Class questions or comments on the unit of instruction

Time: 1-1/2 hrs.

UNIT 12

WORKSHOP: DEMONSTRATING SKILLS
(3 enrollees)

Objectives: Provide enrollees with an opportunity to demonstrate the teaching of selected skills taught in the EMT course.

Requirements: Equipment/materials for skill demonstration
Evaluation forms

OBJECTIVES

1. Brief explanation of objectives of the workshop

PROCEDURES

1. Each enrollee with a practice teaching assignment will devote approximately 15 minutes to practice teaching.

2. Other enrollees will serve as "students" during the practice teaching session.

3. Each practice teaching session will be followed by a 15-minute critique in which instructor and enrollees evaluate the presentation and suggest means for improving it, as appropriate.

Time: 1 hr.

UNIT 13

COURSE PLANNING AND MANAGEMENT

Objectives: Provide the enrollee with EMT course planning and management guidance.

Requirements:

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction.

2. Recognition that role of attendees in planning and managing EMT training will vary depending upon whether their responsibilities involve the overall state, a community or a single course.

3. In general, planning and management functions can be divided into two categories:

   a. Initiating training programs in a state or community.
   b. Conducting training programs.

4. While this is an instructor training institute, many enrollees may be responsible for planning and managing training at either or both of these levels.

INITIATING TRAINING PROGRAMS

1. Planning and management functions involved in initiating training programs in a state or community may include:

   a. Gaining acceptance of the DOT Basic EMT Program as the standard for training.

   b. Assigning responsibility to an individual or group within the state or local community for initiating training programs and ensuring their continuation.

   c. Soliciting and gaining the cooperation of hospitals, education institutions or similar organizations as the site for training.

d. Identifying individuals to serve as Course Coordinators.

e. Orienting Course Coordinators.

2. The manner in which the preceding planning and management functions are accomplished can vary from state-to-state and even within a state depending upon the perceived need, degree of interest, available resources, existing laws and practices, etc. Standardization in accomplishing these functions is neither required nor necessarily desirable in view of the unique characteristics of each state or community.

3. Review with enrollees the experience of some states in accomplising these functions indicating how they vary depending on the characteristics of the community or state.

4. Therefore, standard guidance can be provided in only one area. One of the course documents contains a detailed outline for a one-day Course Coordinator's Program. The purpose of this program is to describe what is involved in conducting a course--essentially the topics covered during the first morning of this institute plus other information. Such a program is essential for individuals who have never conducted such a course. All enrollees might be in an excellent position to conduct a Course Coordinator's Orientation Program. Experience has indicated that both the Course Coordinator and the administrative assistant should attend because of the topics covered. A complete set of course documents should be provided to each attendee for reference during the program and study upon return to his community. It is also helpful if one or more Course Coordinators who have already conducted courses are in attendance to relate experiences.

5. Have some of the enrollees relate their experiences in initiating training programs in their states or communities--not how they planned or managed a course but rather how they got a program started.

CONDUCTING TRAINING PROGRAMS

1. Planning and management functions involved in actually conducting a course (after a site and Course Coordinator have been selected) include the following:

   a. Recruiting instructors and instructor aides
   b. Training instructors and instructor aides
   c. Recruiting students
   d. Scheduling lessons
   e. Determining class size
   f. Obtaining training materials
   g. Maintaining records

2. Requirements and recommendations in most of these areas are contained in the various course documents and have been discussed to some extent in previous sessions. Some key points bear repeating and elaboration. Further, it should be recognized that, like the overall planning and management functions, how the course is conducted will vary depending upon the state and community characteristics.

3. Recruiting instructors and instructor aides:

   a. Medical subjects should be taught by physicians, preferably specialists. Where this is not possible, utilize experienced paramedical personnel such as nurses, EMT's, inhalation therapists, etc.

   b. Recruit from staff of local hospital and local practicing physicians.

   c. Appeal to their community spirit and the fact that EMT's will be handling their patients.

   d. Financial remuneration may be necessary, particularly if they will be expected to teach additional courses.

   e. For non-medical areas, recruit personnel with extensive ambulance experience.

   f. For instructor aides, utilize experienced paramedical personnel.

   g. Financial remuneration will probably be required in the case of instructor aides and possibly the specialists in the non-medical areas.

   h. Recruitment of instructors and instructor aides--one of the prime responsibilities of the Course Coordinator.

4. Training instructors and instructor aides:

   a. Briefing instructor personnel and teaching them how to teach may be the responsibility of enrollees at institute.

   b. This topic will be discussed in detail in a later session.

5. Recruiting students:

   a. Responsibility of the Course Coordinator.

   b. Course is designed for all individuals who have an emergency care responsibility in the community including representatives of:

      . Private ambulance services
      . Volunteers
      . Municipal services
      . Hospital services
      . Rescue squads
      . Other emergency care services

   c. Contact should be made by mail or phone informing each of the above organizations of plans to conduct a course and requesting candidates to attend.

   d. Course Guide specifies prerequisites for taking the course. However, ultimately it is the responsibility of the Course Coordinator to select students for training, at least initially, who will provide the maximum emergency care benefit to the area served. Because of the frequent test and evaluation sessions, it will soon be apparent which students are not capable of continuing.

6. Scheduling lessons:

   a. Each lesson requires from two to three hours for completion.

b. The course was designed so that lessons could be given once or twice per week.

c. Although lessons have been given three times per week, it is recommended that no more than two lessons be scheduled for any one week in order to permit time for study since most students will be working.

d. Practice periods are typically placed at the end of the lessons. Thus, the lessons may be expanded in time for slow learners or may be shortened if the class is exceptionally proficient in learning skills.

7. Determining class size:

a. Should be small to permit maximum interaction between instructor and student.

b. Lecture/demonstration sessions limited to 20 students--no more than 40.

c. Practice sessions--10 students.

8. Obtaining training materials:

a. Medical supplies and equipment can usually be obtained from local hospitals, e.g., oxygen equipment, suction unit, stretchers, ambulance, etc.

b. Training documents, films, slides, manikins and other training aids must be purchased in most cases since they are not usually available locally and are relatively expensive.

9. Maintaining records:

a. It is important to maintain good records to assure keeping up-to-date on student progress. Such records include: registration forms; lesson record

form (see page 29 of Course Guide) which includes information on student attendance and performance; results of practice, test and evaluation lessons; and results of the final written and practical tests.

b. Records are used to:

- Indicate a student is in need of counseling.
- Indicate when a student should be failed prior to course completion.
- Indicate where instructors have failed to have students meet behavioral objectives of lessons.
- Indicate a student qualifies for a license in states requiring same.

10. Have some members of the class who have conducted training programs relate their experiences in actually planning and managing a course.

SUMMARY AND QUESTIONS

1. Summarize functions, emphasizing variation in both types of planning and management functions; the need to adapt to local requirements and constraints; and the need to experiment with different approaches.

2. Class questions and comments on the unit of instruction.

Time: 1 hr.

UNIT 14

WORKSHOP: DEMONSTRATING SKILLS
(2 enrollees)

Objectives: Provide enrollees with an opportunity to demonstrate the teaching of selected skills taught in the EMT course.

Requirements: Equipment/materials for skill demonstration
Evaluation forms

OBJECTIVES

1. Brief explanation of objectives of the workshop

PROCEDURES

1. Each enrollee with a practice teaching assignment will devote approximately 15 minutes to practice teaching.

2. Other enrollees will serve as "students" during the practice teaching session.

3. Each practice teaching session will be followed by a 15 minute critique in which instructor and enrollees evaluate the presentation and suggest means for improving it, as appropriate.

Time: 1-1/2 hrs.

UNIT 15

CONDUCTING PRACTICE, TEST AND EVALUATION LESSONS

Objectives: Explain the uses of evaluation.

Provide enrollees with basic facts to consider in conducting practice, test and evaluation lessons.

Explain the importance of checklists in skill evaluation.

Provide enrollees with the opportunity to develop checklists for the skills covered in the workshops.

Requirements: Workshop skill equipment.

OBJECTIVES

1. Brief explanation of the objectives of the unit of instruction.

WHY EVALUATE?

1. Reasons for evaluating achievement of EMT trainees?

   a. Determine trainee's readiness for a new learning experience.

   b. Estimate progress toward a learning goal (objectives).

   c. Judge effectiveness of a given learning experience (teaching methods).

   d. Provide motivation for achievement.

e. Give trainees feedback concerning their accomplishments.

f. Produce data for records of the learning progress of trainees.

g. Provide a basis for certifying that the individual trainee has successfully completed the course.

EVALUATION PROVIDED IN EMT COURSE

1. Informal evaluation is provided on a day-to-day basis by instructor questioning of student knowledge and observation of skills.
2. Four interleaved practice, test and evaluation sessions provide interim assessment of student progress. (Lessons 6, 12, 13 and 18)
3. A final written test of knowledge is included.
4. A final practical evaluation of skills is included.

ORIENTATION OF UNIT OF INSTRUCTION

1. Each practice, test and evaluation session provides for:

   a. A brief written test of knowledge
   b. Student practice of skills
   c. Evaluation of student skill proficiency

2. Development of written test items are covered in a subsequent unit of instruction.

3. This unit will be devoted to the "practice and evaluation of skills."

4. Principles for conducting the final practical evaluation of skills will be similar to those covered in this unit except that no practice will be provided.

PLANNING THE LESSON

1. Specific procedures cannot be detailed since they are dependent on the number of students in the class, the number of instructors available and the amount of equipment available.

2. It is suggested that the minimum requirements for equipment and instructors as suggested in the lesson plans be available.

3. The instructor is advised that:

   a. Certain skills may be practiced and evaluated simultaneously by all students if sufficient equipment/materials are available--for example, bandaging.

   b. Some skills require constant observation of a single instructor to ensure complete accuracy of student performance--for example, cardiopulmonary resuscitation.

4. It is suggested that instructors divide among them the skills to be practiced and evaluated.

5. Reminder to enrollees that these are practice, test and evaluation lessons; therefore, students should be permitted to practice until it is apparent to the instructor that he can or cannot perform the skill.

6. Discussion by enrollees who have previously conducted courses of how practice, test and evaluation lessons were inserted in their courses.

   or

   If no enrollees have previously conducted courses, class discussion of how lesson 18 might be conducted if there are 30 students, three instructors and the equipment specified in the lesson is available.

EVALUATING SKILLS

1. In order to assure that all students are evaluated in the same manner in the practical tests of skills, the instructor should have a checklist on which he can check off the principal features or characteristics of the skill.

2. The checklist identifies the principal features of the skill.

3. The principal features may not all be necessary steps in the performance of the skill and may not all be of equal weight in actual skill performance.

4. Discussion with enrollees of the checklists provided on page A-10 of the lesson plans.

5. Enrollee practice in developing checklists for the skills covered in the workshop sessions.

   a. Enrollees should work in groups of five. Each group should be responsible for developing a checklist for one of the skills taught in the practice teaching workshops.

   b. The equipment for the skill should be available to each enrollee team, should they wish to perform the skills as an aid in developing their checklists.

   c. When checklists are completed, each team should discuss the skill checklist they developed with the other enrollees.

SUMMARY AND QUESTIONS

1. Summary of contents of the unit of instruction.

2. Class questions or comments on the unit of instruction.

Time: 1-1/2 hrs.

UNIT 16

WORKSHOP: SKILL PRACTICE AND EVALUATION
(3 enrollees)

Objectives: Provide enrollees with an opportunity to critique and evaluate skill performance.

Requirements: Equipment/materials for skill practice/evaluation
Evaluation forms

OBJECTIVES

1. Brief explanation of objectives of the workshop

PROCEDURES

1. Each enrollee with a practice teaching assignment will devote approximately 15 minutes to practice teaching.

2. He should give a brief demonstration of the skill and select one or two enrollees to practice the skill.

3. Other enrollees will serve as "students" during the practice teaching session.

4. Each practice teaching session will be followed by a 15 minute critique in which instructor and enrollees evaluate the presentation and suggest means for improving it, as appropriate.

Time: 1 hr.

UNIT 17

DEVELOPING WRITTEN TESTS

Objectives: Teach enrollees how to develop written tests to evaluate achievement of knowledge using:

- True-false items
- Multiple-choice items
- Matching items
- Completion items
- Essay items

Provide enrollees with techniques for:

- Test construction, administration and scoring
- Interpretation of test results
- Utilization of test results

Requirements:

OBJECTIVES

1. Brief explanation of objectives of the unit of instruction.

2. Enrollees will have an opportunity to practice test item construction in the evaluation workshop.

RELATION TO BEHAVIORAL OBJECTIVES

1. Focus of the lesson is toward evaluating behavioral changes in area of knowledge.

2. Instructional objectives are the reference points of evaluation.

   a. Ask a class member to give one knowledge objective from the EMT lesson plans.

   b. Ask same person how he could determine achievement of that objective.

3. Emphasis of the course is on symptom recognition and emergency care.

ORAL VS. WRITTEN TESTS

1. Two types of tests may be used for evaluating achievement of knowledge.

   a. Oral tests
   b. Written tests

2. Oral testing is usually not feasible unless the class size is extremely small (1-5 people).

   a. Oral tests are very time consuming, but do permit in-depth responses.

   b. Because of the time constraints, oral testing is not expected to be used in connection with the EMT course.

3. Written tests are probably a more acceptable way of evaluating the learning of knowledge.

   a. They are usually paper and pencil type tests.

   b. They usually consist of several test items. Test items can be of two basic types:

      1) Recognition Type--response is provided and learner must select which is the correct response.

      2) Supply Type--learner must supply the response to a given statement, problem, question.

RECOGNITION TYPE TEST ITEMS

1. Description and illustration of the three most frequently used recognition type test items are:

   a. True-false items
   b. Multiple-choice items
   c. Matching items

True-False Test Items

1. Advantages:

   a. There can be a large number of items.

   b. A large content area can be surveyed.

   c. Scoring is rapid and easy.

   d. Items are well adapted for testing situations where only two logical responses are possible.

2. Disadvantages:

   a. Unless item language is precise, there is chance for misinterpretation.

   b. Guessing factor is 50/50. One would not recommend a test entirely composed of true-false items.

3. Suggestions for Item Construction:

   a. Avoid the use of specific determiners. It has been found that on most classroom tests, items which use the words "only" - "all" - "no" - "none" - "always" - "never" - etc., will generally be false. Items with words like "could" - "might" - "can" - "may" and "generally" will usually be true.

   b. Base true-false items upon statements that are absolutely true or false, without qualifications or exceptions.

   c. Avoid negatively stated items when possible and all double negatives.

   d. Avoid textbook statements.

   e. Avoid making the true statements consistently longer than the false items.

f. Avoid complex sentence structure with many dependent clauses.

Multiple-Choice Test Items

1. Advantages:

   a. They yield a more reliable measure.

   b. Effect of guessing reduced.

   c. Plausible incorrect alternatives can require fine discriminations.

   d. They can provide valuable diagnostic information.

   e. They are easy to score.

2. Disadvantages:

   a. Good items are difficult to construct.

   b. Long statements increase reading time--can have fewer items in test.

   c. It is more difficult to cover large amounts of content.

3. Suggestions for Item Construction:

   a. It is recommended that the stem be a direct question.

   b. The stem should set up a clear, definite, explicit and singular problem.

   c. Include in the stem any words that might otherwise be repeated in each response.

d. Avoid making the correct response systematically different from other responses.

e. If possible, the alternatives should be presented in some logical or systematic order.

f. Make all responses plausible and attractive to the less knowledgeable student.

g. The response option (none of the above) should be used with caution, if at all.

h. Each test item should stand alone. A former response should have no bearing on items which follow it.

i. Randomly arrange the correct choice among the alternatives.

Matching Test Items

1. Advantages:

   a. Pictorial or symbolic material may be used.

   b. Compact and efficient way of making a rapid survey of similar knowledges (symptoms, definitions, terminology).

2. Disadvantages:

   a. Not well adapted for measurement of higher order abilities.

   b. Great care needed in development to avoid awkward arrangement of items.

3. Suggestions for Item Construction:

   a. Matching test items should be completed on a single page.

b. Use responses that are related but mutually exclusive.

c. Keep the number of items to be matched relatively small. Ten to 15 items work well.

d. The number of possible responses should exceed the number of items to be matched by two or three.

e. The directions should clearly indicate the basis for matching.

f. Keep the statement in the response column short and present them in some logical order.

SUPPLY TYPE TEST ITEMS

1. Description and illustration of the two most commonly used types of supply type test items.

   a. Completion items
   b. Essay items

Completion Test Items

1. Advantages:

   a. Useful for checking on specific facts.

   b. "Natural" type of item--question-answer situation.

   c. Student must summarize in brief statement; easy to construct.

2. Disadvantages:

   a. Scoring is not completely objective.

   b. Frequently items become only a matter of naming or listing.

3. Suggestions for Item Construction:

a. Request short, definite, clear-cut and explicit answers. An indefinite question statement is likely to lead to scoring problems for instructors and response problems for students.

b. Avoid multi-mutilated statements. Preferably one response and no more than two in each test item.

c. If several correct answers are possible, equal credit should be given to each one.

d. In testing for comprehension of terms and knowledge of definitions, it is often better to provide the term and require a definition rather than provide a definition and require the term.

e. For completion items, it is generally recommended that blanks come near the end of the statement.

f. Minimize the use of textbook expressions. Causes students to memorize the exact wording of the text.

g. In general, direct questions are preferable to incomplete declarative sentences.

Essay Test Items

1. Advantages:

a. Easy to prepare and administer.

b. Permit in-depth responses.

2. Disadvantages:

   a. Limited sampling of content.

   b. Bluffing is possible.

   c. Reliability usually quite low.

   d. Very subjective and difficult to score.

   d. Very time consuming for student.

   e. Very time consuming to score.

3. Suggestions for Item Construction:

   a. Limit the problem which the question poses so that it will have the same meaning to most students.

   b. Use words which will convey clear meaning to the student.

   c. Prepare enough questions to sample the course content broadly, within a reasonable time limit.

   d. Use an essay question for the purposes it best serves, i. e., organization, handling complicated ideas.

   e. Prepare questions which require considerable thought, but which can be answered in relatively few words.

   f. Determine in advance how much weight will be accorded each of the various elements expected in a complete answer.

   g. Without knowledge of students' names, score each question for all students.

   h. Require all students to answer all questions on the test.

   i. Do not construct a test consisting of only one essay question.

TEST CONSTRUCTION, ADMINISTRATION AND SCORING

1. The design and construction of a written test involves several steps.

   a. Review instructional objectives--select those which involve cognitive learning.

   b. Examine course content relevant to objectives.

   c. List topics of subject matter related to each objective.

   d. Determine which type of test item is best for subject matter topics.

   e. Construct one or more test items for each instructional objective.

   f. Sample content widely for comprehensiveness.

   g. Assemble the test, first group by item types, then arrange so that related items are together.

   h. Write clear directions for each type of item in test.

   i. Construct the key.

   j. Reproduce test for administration.

   k. Administer test.

   l. Score test--each item or response counts as 1 point. Example: If the total test consists of 50 separate responses, then the maximum possible raw score is 50.

INTERPRETATION OF TEST RESULTS

1. Raw test scores are rather meaningless in themselves. They must be transposed into some form of unit that has meaning to the student.

2. Percentages were selected as the form for reporting test scores. Scores reported in percentage form are relatively easily understood by most persons.

3. The course coordinator must examine the test results in terms of how well the students achieved the objectives of the lesson(s). He must decide the lowest passing score.

4. Scores at and above the minimum passing score receive a grade of PASS. Those below receive NO PASS.

5. A NO PASS grade on an interim test indicates a need for additional study or individual student counseling.

6. Those receiving a grade of NO PASS should be informed of the objectives that they have not yet achieved at the minimum performance level. This information is very helpful to guide students in their make-up study.

UTILIZATION OF TEST RESULTS

1. Analysis of test item failures for purposes of:

   a. Evaluating student achievement.
   b. Evaluating the learning environment.
   c. Evaluating the instructor.

2. Use of the test results to improve instruction.

SUMMARY AND QUESTIONS

1. Contents of session--ask group members to respond to review questions:

   a. What is the relationship between instructional objectives and evaluation?

   b. What are some examples of learning in the knowledge category in the EMT course?

c. How can we measure knowledge?

d. What are the basic steps of test construction?

e. How can you utilize test scores to improve instruction?

2. Questions regarding the topic of this session.

Time: 1 hr.

UNIT 18

WORKSHOP: SKILL PRACTICE AND EVALUATION
(2 enrollees)

Objectives: Provide enrollees with an opportunity to observe and evaluate skill performance.

Requirements: Equipment/materials for skill practice/evaluation
Evaluation forms

OBJECTIVES

1. Brief explanation of objectives of the workshop

PROCEDURES

1. Each enrollee with a practice teaching assignment will devote approximately 15 minutes to practice teaching.

2. He should give a brief demonstration of the skill and select one or two enrollees to practice the skill.

3. Other enrollees will serve as "students" during the practice teaching session.

4. Each practice teaching session will be followed by a 15 minute critique in which instructor and enrollees evaluate the presentation and suggest means for improving it, as appropriate.

Time: 1-1/2 hrs.

UNIT 19

WORKSHOP: DEVELOPING WRITTEN TESTS

Objectives: Provide each enrollee with the opportunity to develop a variety of written test items.

Requirements:

OBJECTIVES

1. Brief explanation of objectives of unit of instruction.

2. Emphasis of the point that good test items are difficult to construct.

3. Each enrollee should remember the basic emphasis of the course in developing test items, that is, the practical aspects of emergency care as opposed to theory.

TEST ITEM DEVELOPMENT

1. Working in four groups (three or four enrollees in each group) enrollees should develop test items to satisfy some of the objectives of each of the four practice, test and evaluation lessons and of the final written test (lessons 6, 12, 18 and 24).

2. Enrollees are not expected to develop a complete test for each of the EMT course testing lessons; rather, they should develop a sampling of test items pertinent to the lessons.

3. The sampling of test items should include the following types:

   a. True - False
   b. Multiple choice
   c. Matching
   d. Completion
   e. Essay

4. At the completion of test item development, each team should discuss with the group the test items developed.

5. Each group should discuss and evaluate the test items prepared by other groups.

Time: 2-1/4 - 2-1/2 hrs.

UNIT 20

WORKSHOP: INSTRUCTOR TRAINING COURSE TEACHING PRINCIPLES

Objectives: Provide enrollees with a final opportunity to utilize teaching techniques taught in the Instructor Training Institute.

Requirements: Emergency care equipment and materials.

OBJECTIVES

1. Brief explanation of the objectives of the unit of instruction.

PROCEDURES

1. Enrollees will be called upon at random to utilize the teaching techniques taught in the course. Use will be made of previous teaching workshop assignments.

2. As many enrollees and as many of the following types of instruction as possible will be covered in the time available:

   a. Introducing a topic, that is, explaining what will be taught

   b. Giving a lecture

   c. Promoting class discussion

   d. Demonstrating a skill

   e. Supervising skill practice

   f. Evaluating skills

Time: 30-45 mins.

UNIT 21

APPLICATION OF PRINCIPLES LEARNED AT INSTITUTE

Objectives: Enable the enrollee to aid other instructors in teaching the EMT course.

Requirements:

OBJECTIVES

1. Brief explanation of the objectives of the unit of instruction:

   a. EMT course is unique in that it usually involves the use of many instructors and instructor aides representing different specialties.

   b. Limited funds and time preclude conducting instructor training institutes for all individuals likely to serve as instructors.

   c. Nevertheless, the need for instructor training still exists.

   d. In many cases, graduates of this institute may have to provide the instructor training to the best of their ability under the circumstances prevailing in their communities. Such circumstances include: reluctance on the part of many individuals to take instructor training, particularly if they are devoting off-hours to teaching part of the course; limited time to conduct instructor training; limited experience in conducting instructor training.

   e. The objective of this session is to provide those enrollees who may be faced with such a responsibility with some guidance as to how to conduct a mini-instructor training program.

COURSE OUTLINE

1. Discussion of possible topics to cover in a mini-instructor training program and identification of sources of materials to use as references:

Unit I - Course Overview

- Objectives, scope and orientation of EMT basic training program (see Course Guide).
- Functions of the EMT (see Appendix D of Lesson Plans).
- Medicolegal aspects of the EMT's job (see AAOS Text and local laws).
- Course documents.
- Using the lesson plans (see Lesson Plans).
- Recommended teaching aids (see Course Guide).
- Lesson preparation (see Checklist on page 16 of Course Guide).

2. If time is extremely limited, Unit I could be eliminated by simply providing each instructor with a copy of the course documents and instructing him to read pertinent sections as well as performing all the tasks specified in the checklist on page 16 of the Course Guide. With that as background, the instructor would be better prepared when attending Unit II.

Unit II - Instructional Techniques

- Techniques for conducting lecture/discussion sessions.
- Techniques for conducting skill demonstration sessions.

- Techniques for conducting skill practice sessions.

- Techniques for constructing questions for written tests and checklists for skill evaluation sessions.

3. Unit II is the most important part of the mini-instructor training program. If time is extremely limited, the mini-instructor training program could be devoted entirely to Unit II.

4. Techniques in each of the instructional areas should be presented in lecture/discussion sessions. Time permitting, the instructor trainer should demonstrate application of the techniques using a segment of one of the lesson plans.

5. Reference material to be used in presenting instructional techniques in a mini-instructor training program might include:

   a. Notes and handouts from this institute
   b. Appendices A and B of the Lesson Plans
   c. Others

Unit III - Practice Teaching Workshops

- Lecture/discussion
- Skill demonstration
- Skill practice
- Constructing test items and checklists

6. Depending upon time available and degree of cooperation obtained, practice teaching workshops should be conducted similar to the ones conducted at this institute. The procedures for doing so are straightforward and should be apparent to all after this institute. Insofar as improving performance of instructors, there is no substitute for practice before a class. Again, if time is limited, practice teaching could be restricted to a few individuals.

PREPARATION

1. If mini-instructor trainer programs are conducted, the same planning and management functions must be performed as in the case of conducting the Basic EMT Training Program, i.e., locating facilities, scheduling lessons, obtaining training aids, etc.

2. The major difference between the two programs is that lesson plans have not been developed for the mini-instructor trainer program. These must be developed by each enrollee since they will vary depending upon the time available for instructor training.

3. All or some of the units of instruction given in this Instructor Training Institute might be applicable for a training program at the local level.

DISCUSSION

1. Have enrollees relate their experiences, if any, in training instructors to teach the EMT course.

SUMMARY AND QUESTIONS

1. Summarize major points.

Time: 3 hrs.

UNIT 22

INSTITUTE REVIEW, EVALUATION, AND GRADUATION

Objectives:	Provide enrollee with a review of major points covered in the Institute.
	Obtain enrollee comments and opinions on the value of the Institute and their suggestions for improving the Institute.
	Describe procedures for completion of reimbursement forms.
Requirements:	Institute evaluation forms (one for each enrollee), Reimbursement forms (one for each enrollee).

OBJECTIVES

1. Brief explanation of objectives of the unit.

REVIEW

1. Review of major points relative to:

    a. Using the lecture/discussion technique
    b. Using instructional aids
    c. Teaching and evaluating skills
    d. Developing evaluation instruments

(Distribute evaluation forms)

INSTITUTE EVALUATION

1. Enrollee completion of evaluation forms.

2. Enrollee comments on Institute as appropriate.

(Distribute reimbursement forms)

REIMBURSEMENT FORM

1. Review of procedures for forms completion.

2. Enrollee completion of forms.

GRADUATION

1. Indicate that an Institute completion certification will be mailed to each enrollee.

APPENDIX

ENROLLEE HANDOUTS

APPENDIX

This appendix contains materials handed out to Institute enrollees. It includes the following:

- Lesson Titles and Reading Assignments--these two pages represent revisions of pages D-3 and D-4 of the Instructor's Lesson Plans for the Basic Training Program for Emergency Medical Technician--Ambulance. The revisions represent slight corrections due to changes in the student manual after the lesson plans had gone to press. The pages are handed out in Unit 3.

- Workshop Assignments--enrollees made selections from this page for their practice teaching workshops. It was handed out in Unit 7.

- Practice Teaching Workshops--this handout was prepared as a reminder of the purpose and emphasis of the various practice teaching workshops. It was handed out in Unit 7.

- Checklist for Practice Teaching Discussion--these pages include a list of instructional qualities to be considered by enrollees in evaluating the various practice teaching sessions. Also attached are details of good and bad features of each instructional quality. It was handed out to enrollees in Unit 7.

LESSON TITLES AND READING ASSIGNMENTS

Lesson Title	Reading Assignment
1. The Emergency Medical Technician--His Role, Responsibilities and Equipment	No assigned reading
2. Airway Obstruction and Pulmonary Arrest	AAOS Chapters: 1, 5, 14, 15, 58 First Aid for Laryngectomees
3. Mechanical Aids to Breathing and Pulmonary Resuscitation	AAOS Chapters: 14, 15
4. Cardiac Arrest	AAOS Chapters: 6, 16
5. Bleeding, Shock and Practice on Airway Care, Pulmonary Resuscitation and Cardiopulmonary Resuscitation	AAOS Chapters: 6, 13, 17, 18
6. Practice, Test and Evaluation--Airway Care, Pulmonary Arrest, Cardiac Arrest, Bleeding and Shock	AAOS Chapters: 1, 5, 6, 13, 14, 15, 16, 17, 18, 58 (review); First Aid for Laryngectomees (review)
7. Wounds	AAOS Chapters: 19, 49
8. Fractures of the Upper Extremity	AAOS Chapters: 2, 3, 20, 21, 22
9. Fractures of the Lower Extremity	AAOS Chapter: 23
10. Injuries to the Head, Face, Neck and Spine	AAOS Chapters: 4, 24, 25, 26, 49
11. Injuries to the Eye, Chest, Abdomen, Pelvis and Genitalia	AAOS Chapters: 7, 8, 9, 10, 27, 28, 29, 30, 49

(Continued on next page)

Lesson Title	Reading Assignment
12. Practice, Test and Evaluation-Injuries I	AAOS Chapters:1, 2, 3, 6, 7, 8, 9, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 49 (review)
13. Practice, Test and Evaluation-Injuries II	AAOS Chapters: 2, 3, 20, 21, 22, 23, 24, 28 (review)
14. Medical Emergencies I	AAOS Chapters: 38, 40, 41, 44
15. Medical Emergencies II	AAOS Chapters: 39, 42, 43, 45, 48
16. Childbirth and Problems of Child Patients	AAOS Chapters: 46, 47
17. Lifting and Moving Patients	AAOS Chapter: 50
18. Practice, Test and Evaluation--Medical Emergencies, Emergency Childbirth, Lifting and Moving	AAOS Chapters: 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50 (review)
19. Environmental Emergencies	AAOS Chapters: 31, 32, 33, 34, 35, 36, 37
20. Extrication from Automobiles	AAOS Chapter: 53 Supplementary Reading - AAOS Chapter 54
21. Operations--Driving an Emergency Vehicle, Maintaining a Safe and Ready Vehicle, Records and Reports, Communications, and Procedures at Hospital Emergency Rooms	AAOS Chapters: 55, 56, 57, Supplementary Reading - AAOS Chapters: 51, 52
22. Responding to an Ambulance Call	AAOS Chapters, 13, 55
23. Situational Review	All assigned reading to date (review)
24. Final Written Test	All assigned reading to date (review)
25. Final Practical Evaluation of Skills	All assigned reading to date (review)

WORKSHOP ASSIGNMENTS

TUESDAY (Lecture)	WEDNESDAY (Skill Demonstration)	THURSDAY (Skill Practice)
1. Shock: Lesson 5, Page 6, Items 1-3, 5-6	1. Rib Fractures: Lesson 11, Page 5, Items 1-5	1. Mouth to Mouth Resuscitation: Lesson 2, Pages 6-7, Item 2
2. Fractures: Lesson 8, Page 4, Items 1-8	2. Mouth to Mouth Resuscitation: Lesson 2, Page 5, Items 1-7	2. CPR: (one rescuer) Lesson 4, Page 6, Item 2b (first sentence only)
3. Fractures: Lesson 8, Page 5, Items 1-8	3. CPR: Lesson 4, Page 5, Items 2-5	3. CPR: (two rescuers) Lesson 4, Page 6, Item 2b (second sentence only)
4. Heart Attack: Lesson 14, Page 6, Items 1-4	4. Splinting the Forearm: Lesson 8, Page 7, Item 5	4. Splinting: (forearm only) Lesson 8, Pages 7-8, Item 2
5. External Bleeding: Lesson 5, page 4, Items 1-4, 6-8	5. Injuries to Skull and Brain: Lesson 10, Page 5, Items 1-5	5. Injuries to Skull and Brain: Lesson 10, Pages 7-8, Items 2a
6. Ingested Poisons: Lesson 14, Page 3, Items 1-6	6. Dressing and Bandaging: (shoulder wound) Lesson 7, Page 6, Items 1, 2, 7c	6. Dressing and Bandaging: (shoulder wound) Lesson 7, Page 7, Item 2f (shoulder only)
7. Dyspnea: Lesson 14, Page 8, Items 1-7	7. Injuries to the Eye: (protruding eyeball) Lesson 11, Page 3, Items 2, 3, 10	7. Injuries to the Eye: (protruding eyeball) Lesson 11, Pages 8-9, Item 2b

PRACTICE TEACHING WORKSHOPS

1. A topic should be selected from the workshop assignment sheet.

2. Working with the Instructor's Lesson Plans, the enrollee should prepare a 15-minute presentation on the topic selected.

3. The enrollee should start his presentation with a brief description of the objectives to be achieved.

Lecture (Tuesday)

1. Enrollee should utilize lecture/discussion techniques.

2. Visual aids will be limited to the blackboard and any other slides available at the Institute.

Skill Demonstration (Wednesday)

1. Enrollee should provide the background for the skill utilizing lecture/discussion techniques.

2. Visual aids will be limited to the blackboard and any other slides available at the Institute.

3. Emergency care equipment and supplies provided at the Institute should be used for the demonstration of the skill.

Skill Practice (Thursday)

1. Enrollee should assume that the background for the skill has previously been covered.

2. He should give a brief demonstration of the skill using emergency care equipment and supplies provided at the Institute.

3. He should select one or more Institute enrollees to practice the skill.

4. He should supervise the practice session and evaluate the student's skill achievement.

CHECKLIST
FOR
PRACTICE TEACHING DISCUSSION

The attached list of Instructional and Personal Qualities should be considered in discussing each of the practice teaching presentations. As appropriate, ways and means for improving the presentation in each of the areas should be suggested during the discussion period. Attached, for reference purposes only, is a description of good and bad qualities in each area. These should be used as a guide in preparing presentations and as points of reference when discussing a particular presentation. However, evaluation or rating of presentations is <u>not</u> required or desired.

CHECKLIST--PRACTICE TEACHING WORKSHOPS

Instructional Qualities

		Comments
1.	Knowledge of Subject	
2.	Preparation and Planning	
3.	Questioning Technique	
4.	Student Participation	
5.	Selection and Use of Training Aids (as appropriate)	
6.	Lesson Introduction	
7.	Lesson Development	
8.	Lesson Summary	
9.	Management	
10.	Control and Discipline	
11.	Achievement of Objectives	

GUIDE TO THE EVALUATION OF INSTRUCTION

ACKNOWLEDGEMENT

This material was taken from an article in the periodical, Training in Business and Industry, May-June 1965. The title of the article is "Do Instructors Need First-Hand Rating?" and was written by William R. Tracey.

VIE 5 - SUPERVISED TEACHING

GUIDE TO THE EVALUATION
RATING STANDARDS

INSTRUCTIONAL QUALITIES

1. Knowledge of subject

(1) Unsatisfactory. Fundamental knowledge lacking; appears devoid of allied information; frequent errors of fact; many ambiguities and misleading statements; frequently bluffs to cover up inadequacies; avoids answering direct questions.

(2) Below average. Information disjointed, superficial, bordering on the inadequate; occasional errors in fact; occasional ambiguities and misleading statements; sometimes tries to bluff.

(3) Average. Knowledge limited to specific area of teaching responsibility but clearly adequate for present teaching duties; average command of information in instructional field; organized.

(4) Above Average. Accurate and well-organized knowledge of field; a strong background for subject being taught; comfortable knowledge of allied fields; uses variety of illustrative materials.

(5) Outstanding. Demonstrates mastery of subject; genuine scholarship; rich store of information pertinent to situation; exceptionally well-chosen illustrations; wide knowledge of related fields; well-organized.

2. Preparation and planning

(1) Unsatisfactory. Little or no planning in evidence; no provisions made for individual differences; objectives not defined, unattainable, or unrealistic; organization haphazard; fails to provide for integration with other lessons.

(2) Below average. Planning incomplete and superficial; provision made for meeting needs of faster or slower students with little regard for others; objectives not clearly defined; organization and continuity somewhat lacking; extremely limited provision for integration.

(3) Average. Obviously planned and with some imagination; shows consideration for individual and class differences; objectives clearly defined; organization adequate; simple to complex emphasized; recognizes need for integration; method and techniques appropriate.

(4) Above Average. Very well prepared; material well organized; evidence of thoughtful planning; objectives clearly and well defined; plans for meeting individual and class differences; selects an appropriate variety of techniques and materials; provides for integration.

(5) Outstanding. Completely and thoroughly prepared; imaginative planning; intelligent and comprehensive organization of material; evidence of complete and thoughtful planning for meeting individual and class differences; objectives valid, attainable, and clearly set forth; techniques selected require student participation; provision for integration.

3. Questioning technique

(1) Unsatisfactory. No evidence of planning; questions unsuited to class situation because of irrelevance, vagueness, or vocabulary level; student questions discouraged; questions fragmentary or inconsequential; handles responses poorly; often misunderstands student questions or the reason for the confusion that prompted the question.

(2) Below Average. Inadequate planning in evidence; questions call for little student thought; questions not well distributed; frequently violates mechanics of asking questions; questions poorly framed; responses not fully exploited; students afforded very limited opportunity to ask questions; sometimes fails to understand student questions.

(3) Average. Some evidence of planning; questions reasonably well formulated and understood by students; uses some thought-provoking questions; mechanics of questioning satisfactory; student questions and responses handled adequately.

(4) Above Average. Evidence of planning; uses suitable questions which produce interested and generally effective student responses; frames thought-provoking questions; uses correct procedures; distributes questions and provides excellent answers.

(5) Outstanding. Evidence of careful planning for the use of questions; unusually skilled in framing questions; consistently uses correct

questioning procedures; skillful in asking questions which elicit responses related to the objective; questions widely distributed among class; handles student questions and responses exceptionally well; employs student responses to move the lesson forward; encourages student questions and provides clear and complete answers.

4. Student participation

(1) Unsatisfactory. Active participation: instructor unable to obtain participation; or instructor unwilling to encourage participation; students obviously sullen or rebellious; students hesitant or afraid to take part because of poor instructor-student rapport. Passive participation: instructor obviously unable to generate interest; students bored, restless, or inattentive.

(2) Below Average. Active participation: environment created by instructor fails to elicit general interest and participation; many students reluctant to take part; participation obtained by compulsion; instructor depends upon a few aggressive students for reaction; some imbalance in student-instructor active participation. Passive participation: student interest and attention marginal; lapses in attention frequent and sustained.

(3) Average. Active participation: real interest in participating aroused in most students; timid and weaker students not responding; adequate balance of student-instructor active participation, consistent with method used; instructor attends more to capable, self-confident students. Passive participation: students interested and attentive with only occasional and temporary lapses.

(4) Above Average. Active participation: most students willing to participate; students with the instructor all the way; only a few students must be cajoled into taking part; excellent balance of student-instructor active participation. Passive participation: students interested; show that they are with the instructor; lapses in attention rare.

(5) Outstanding. Active participation: participation spontaneous; atmosphere created by instructor encourages student participation; all students eager to take part; students assume responsibility for their own learning; proper balance of student-instructor active participation maintained, consistent with method used. Passive participation: students evidence high interest in the presentation, hanging on every word, attention sustained throughout the period.

5. Selection and use of training aids

(1) Unsatisfactory. Training aids inadequate or lacking; aids fail to illustrate the point; instructor and class unprepared for use of the aid; aids used as crutches; aids do not augment verbal instruction; aids handled in a clumsy fashion; explanation sketchy and insufficient.

(2) Below Average. Poor judgment in selection of types of aids; incomplete preparation for use; lesson constructed around aids prepared for other instruction; aids used solely as eye-wash; transition between aids lacks smoothness; mechanics of using aids occasionally mishandled.

(3) Average. Training aids adequate; illustrate the point; evidence of preparation and acquaintance with aids; aids introduced at proper time and used with satisfactory skill.

(4) Above Average. Shows imagination and originality in the selection and development of aids; well prepared for the use of the aid; aids smoothly displayed; aids integrated into lesson; excellent accompanying explanation; mechanics of use of aid well handled.

(5) Outstanding. Shows exceptional imagination and ingenuity in the selection and development of training aids; evidence of careful and complete preparation for the use of the aid; aids displayed smoothly and skillfully; aids completely integrated into the lesson; accompanying explanation crystal-clear and complete; mechanics of use of aid exceptionally well handled.

6. Lesson Introduction

Each initial lesson in a sequence of lessons requires a clear definition of the purpose, scope, and importance. Succeeding lessons in a continuous block of instruction require only that the instructor show how the lesson ties in with the complete sequence.

(1) Unsatisfactory. Introduction completely devoid of imagination and ingenuity; failed to secure student attention; purpose and objectives not clearly stated; importance of material not mentioned; fails to relate instruction to preceding or succeeding lessons.

(2) Below Average. Secures class attention but with considerable effort; superficially defines purpose and objectives; outlines scope of lesson; relates importance of material; inadequately relates instruction to preceding or succeeding lessons.

(3) Average. Secures class attention; adequately defines purpose and objectives; relates scope of lesson; stresses importance of material. For the second and succeeding hours of a continuous block of instruction, handled by the same instructor: secures attention and ties in the work of the hour to that of preceding hour(s).

(4) Above Average. Captures attention effectively and effortlessly; clearly explains purposes and objectives; stresses importance of material to individual; fully defines the scope of the lesson; and/or refers the lesson to related materials.

(5) Outstanding. Uses imagination and ingenuity in securing immediate and undivided attention of class; defines purpose and objectives of lesson clearly and fully; sells importance and meaningfulness of material to the individual; provides an interesting overview of the scope of the lesson; and/or clearly relates present instruction to materials previously learned.

7. Lesson development

(1) Unsatisfactory. Presentation fails because of poor organization, lack of unity, or inappropriate method or techniques; techniques bungled; individual differences ignored; fails to understand student difficulties; instruction is unquestionably dull, prosaic, and plodding; student reaction neither solicited nor encouraged; floored by the unexpected; examples and illustrations lacking.

(2) Below Average. A barely acceptable presentation because of faulty organization; abrupt transitions; marginal application of techniques; instruction bordering on the dull, prosaic, and plodding; no use made of student leads; instructor relatively inflexible; reads notes frequently; treatment of students impartial but unsympathetic; frequently fails to understand student learning difficulties; illustrations or examples infrequently used or inappropriate.

(3) Average. A reasonably good presentation; well organized; techniques appropriate but limited in variety; attends to obvious student difficulties; subject matter sometimes enphasized to the exclusion of individual student needs; uses notes inconspicuously; usually makes transitions smoothly; some use made of student leads; handles most unexpected situations well; uses appropriate illustrations and examples.

(4) Above Average. A very good lesson; well organized; interesting and informative; understandable and clear; good transition; appropriate variety in techniques and materials; effectively uses student contributions

and leads; handles the unexpected quite well; adapts work to individual needs with better than average success; uses examples and illustrations effectively.

(5) Outstanding. A fine lesson; exceptionally well organized; interesting, coherent, unified; variety of techniques and materials used skillfully; smooth transitions from one phase of lesson to another; clever and unique approach; flexible; resourceful in meeting unanticipated situations; ingeniously exploits student contributions and learning difficulties; uses many vivid and apt illustrations and examples.

8. Lesson summary

Each concluding lesson in a block of instruction requires a complete and comprehensive summary in which the main teaching points are emphasized and further applications are delimited, and a strong closing statement. Preceding lessons within the block require only periodic internal summaries.

(1) Unsatisfactory. No summary provided; or simply makes a token effort to summarize.

(2) Below Average. Internal summaries lacking; merely restates scope of lesson; or hurriedly recaps teaching points.

(3) Average. Recaps main teaching points; clears up student confusion.

(4) Above Average. Evidence of careful attention to summary; recaps effectively; reemphasizes main teaching points; clarifies difficult areas; uses a closing statement.

(5) Outstanding. Uses imagination and originality in concluding the lesson; recapitulation is complete and comprehensive; primary teaching points are emphasized and difficult area clarified; new relationships are defined; strong closing statement.

9. Management

(1) Unsatisfactory. Haphazard management practices; routines poorly managed; materials of instruction unavailable when needed; continuous confusion; little or no regard shown for physical conditions; seating arrangements inappropriate for lesson type.

(2) Below Average. No consistent management practices; some confusion; materials of instruction on hand but in disorder; only token attention given to physical conditions, classroom and seating arrangements marginal.

(3) Average. Classroom orderly; routines satisfactorily managed; materials of instruction available but not ideally arranged; some attention paid to physical conditions; room and seating arrangements adequate.

(4) Above Average. Classroom routines well managed, adequate attention given to physical conditions; instructional materials available and ready to use; room arrangements suited to instruction; seating arrangements adequate.

(5) Outstanding. Classroom routines managed rapidly, quietly, and efficiently; gives careful attention to physical conditions (heat, light, and ventilation); instructional materials readily accessible and ready to use; room arranged most advantageously for planned instruction; seating arrangements ideally set up.

10. Control and discipline

(1) Unsatisfactory. Disrespect and disorder in evidence; instructor not aware of centers of difficulty; lacks ability to individualize problem areas; uses ridicule, sarcasm, threats to excess.

(2) Below Average. Some disciplinary problems in evidence; instructor recognizes centers of difficulty but deals with them ineffectively; uses threats, reprimands, ridicule or sarcasm to keep order.

(3) Average. Control adequate; some minor difficulties may be in evidence; control secured through threat of punishment, frequent reprimand, cajolement, or coaxing.

(4) Above Average. Group well controlled; control secured primarily through instructor's forceful personality and student's desire for his approval; handles problems well.

(5) Outstanding. Class orderly, interested, attentive; control strong; control primarily secured through interest in class activities; instructor patient, tactful, and effective in dealing with problems.

11. Achievements of objectives

(1) Unsatisfactory. No apparent check made of student learning; checks made totally ineffective; lesson objectives clearly not achieved.

(2) Below Average. Inadequate check made of student learning; remedial technique ineffective or inappropriate; achievement of objectives questionable.

(3) Average. Uses some means of determining extent to which students have learned; utilizes adequate remedial techniques; indications point to satisfactory achievement of most students.

(4) Above Average. Uses excellent means of determining the extent to which objectives have been achieved; checks periodically on student understanding and achievement; uses good remedial techniques; all learning checks and other observations indicate that lesson objectives have been thoroughly achieved by the class with a few exceptions.

(5) Outstanding. Uses clear-cut and definite means of determining level of student achievement; checks periodically and thoroughly on student understanding and achievement; difficulties revealed by checks receive immediate attention; remedical teaching exceptionally effective; all indications point to superior achievement of lesson objectives by the class.

PERSONAL QUALITIES

12. Appearance and bearing

(1) Unsatisfactory. Untidy in attire and personal care; posture or bearing poor.

(2) Below Average. Somewhat careless in attire; details of personal care show neglect; posture or bearing somewhat deficient.

(3) Average. Moderately neat and well groomed; details of personal care generally satisfactory; adequate posture and bearing.

(4) Above Average. An excellent model and standard in appearance; clothing and person neat, clean and well groomed; good posture and carriage; excellent bearing.

(5) Outstanding. A near-perfect model and standard in appearance; evidence of special attention to fit and press of clothing; scrupulously neat, clean and well groomed; fine bearing and posture.

13. Voice

(1) Unsatisfactory. Fails to meet requirements; rasping, shrill, strident, or inaudible.

(2) Below Average. Barely meets minimum standards; may be somewhat monotonous; noticeably high; noticeably weak; may exhibit undesirable mannerisms, e.g., affectation, stilted manner.

(3) Average. Natural; adequate volume; clearly above minimum standards; may be somewhat lacking in color and range; voice may fade occasionally.

(4) Above Average. Well modulated, pleasing and distinct; appropriate variety in pitch and volume.

(5) Outstanding. Clear; pleasant, natural; variety in pitch and volume; forceful; conveys interest and enthusiasm; uses emphasis as appropriate.

14. Speech

(1) Unsatisfactory. Very deficient in grammer or vocabulary; uneven, excessively choppy speech; too rapid; too slow and drawling; noticeably defective, e.g., lisping, stuttering, frequent mispronunciations.

(2) Below Average. Slurred; not articulate; may grope for words; choppy, many vocalized pauses; limited vocabulary; repeats pet words and phrases; uses slang; uses words beyond the comprehension of the class; careless in use of English.

(3) Average. Speaks without difficulty; free from undesirable speech habits; makes few errors in English usage; uses reasonably good choice of words.

(4) Above Average. Speaks with ease and precision; conversational with informal correctness; good choice of words; uses appropriate inflection and emphasis.

(5) Outstanding. Articulates and enunciates clearly, correctly, naturally, and vividly; superior command of English; fluent expression; colorful vocabulary.

15. Platform manner

(1) Unsatisfactory. Gestures stilted, meaningless or affected; stares at floor, ceiling, or one spot in the room; continuously shifts eyes without fixing on any individual; depends completely on notes; possesses extremely distracting mannerisms.

(2) Below Average. Gestures infrequently used; stays rooted to one spot; gestures bordering on the stilted or affected; indecisive, often loses eye contact; frequently distracting mannerisms; movements often affected, stiff, unnatural, or excessive; movements awkward, repetitious, or meaningless.

(3) Average. Gestures typically natural and meaningful; usually decisive; usually maintains eye contact; occasional distracting mannerisms in evidence; body movements typically natural, decisive, and purposeful (in contrast with random, excessive movements which serve only as an outlet for nervous energy).

(4) Above Average. Gestures appropriate, natural, purposeful, eye eye contact consistently maintained; mannerisms rarely distracting; movements purposeful and natural; few unplanned and random movements.

(5) Outstanding. Gestures always natural, meaningful, decisive, emphatic; eye contact smooth and continuous, direct, encompasses entire class; personal; completely free from distracting mannerisms of movements and actions; no evidences of nervousness; movements on the platform always planned, decisive and purposeful.

16. Teaching personality

(1) Unsatisfactory. Emotionally unstable: always seems to say the wrong thing; uncouth, or impolite; flustered, hurried; strained and impatient; negligent; critical and fault-finding; harsh; definitely unfriendly or too familiar.

(2) Below Average. Somewhat oversensitive; easily upset; often hurts student feelings; somewhat unconventional in terms of polite practices; aloof; talks down to students; impatient; cold; hesitant, timid, apologetic; wavering, somewhat over-familiar with students; lacks self-confidence.

(3) Average. Emotionally stable but somewhat upset by the unexpected; usually patient; civil; conforms to conventional practices; somewhat serious, reserved, or exacting; generally says the wise thing; consistent; moderately firm.

(4) Above Average. Cheerful; well balanced; courteous; poised but with some effort; tries to be objective; tactful in most situations; friendly with an understanding adult point of view; decisive; determined; steady.

(5) Outstanding. Emotionally well balanced; always courteous and poised; objectively decisive; enthusiastic; conveys interest in subject; considerate of students; friendly but avoids overfamiliarity; dynamic and aggressive; displays sense of humor; able to see student's point of view; confident.

APPENDIX D

NHTSA CURRICULUM MATERIAL SUMMARIES

This appendix contains executive summaries of the NHTSA curriculum materials. As such, they describe the purpose of the study, the purpose and contents of each document, the source for obtaining copies and pricing data--see particularly pp. D-2, D-7, and D-13.

executive summary

A SYNOPSIS OF A RECENTLY RELEASED NATIONAL HIGHWAY SAFETY BUREAU RESEARCH REPORT

BASIC TRAINING PROGRAM FOR EMERGENCY MEDICAL TECHNICIAN - AMBULANCE

INSTRUCTOR'S LESSON PLANS

The purpose of this study was to develop guidelines and supporting materials for a short term course of instruction for emergency medical service personnel at the entry level.

The contractor developed a training program consisting of three guidance documents and a final report under the general title: Basic Training Program for Emergency Medical Technicina-Ambulance. This summary briefs one of the guidance documents-"Instructor's Lesson Plans", now available through the U. S. Superintendant of Documents, Government Printing Office.* The two other guidance documents, "Course Guide and Course Coordinator Orientation Program", HS-800 182, which have been combined in one publication and Concepts and Recommendations, HS-800 181, are also available at GPO.

Contract No. FH-11-6967
Dunlap & Associates, Inc.
Darien, Connecticut 06820
NHSB No- HS-800 226
Sub-title: Instructor's Lesson Plans

Award Amount: $78,562.00
Date Report Due: 2/25/70
Date Report Rec'd: 2/25/70
Release Date: 4/21/70

*(Superintendant of Documents,
U. S. Government Printing Office
Washington, D. C. 20402
Price $2.50 [USGPO: 1970 0-386-625]

This document has been prepared to aid the instructor in conducting a basic training course for Emergency Medical Technicians (EMT's) performing as attendants and drivers on ambulances. It contains detailed lesson plans for the course, guidelines for developing test materials and for conducting lesson in which student knowledges and skills are evaluated, guidelinges for effective teaching, supplementary references for the insturctor, and samples of forms to be handed out to the students.

OBJECTIVES AND SCOPE OF COURSE

The training course described herein represents the first phase of training in the Emergency Medical Technician career structure. The course covers all techniques of emergency medical care presently considered within the responsibilities of the Emergency Medical Technician as well as all operational aspects of the job which he will be expected to perform. Specific content of the course is based on the National Highway Safety Bureau Program Standard No. 11 and guidelines and recommendations for training ambulance personnel prepared by the Committee on Emergency MedicalServices of the National Academy of Sciences.

The course emphasizes the development of student skill in recognition of symptoms of illnesses and injuries and proper procedures of emergency care. As such, reliance is placed heavily on demonstration and practice as a teaching method. Each lesson allows practice of specific skills covered in the lesson as appropriate; and practice, test and evaluation sessions designed to assure attainment of proficiency levels in all skills are included.

Specific objectives of the course are as follows:

- To teach students the overall role and responsibilities of the emergency technician in performing both the emergency care and operational aspects of his job.
- To develop student skill in diagnosis and all emergency treatment procedures short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician.
- To develop student skill in the use of and care for all equipment required to accomplish his job.

- The total course consists of 25 lessons involving 71 hours of classroom training plus 10 hours of in-hospital observation and training for a total of 81 hours. The first lesson is devoted to an overview of the emergency medical technician's job, a description of the training course and an overview of anatomy and physiology. It is followed by lessons on life threatening emergencies, injuries, common medical emergencies, childbirth and problems of child patients, lifting and moving patients, environmental emergencies, extrication from automobiles, and operational aspects of the EMT's job. Two lessons provide for an integration of operational and medical knowledge by a discussion of student responsibilities during various phases of responding to an ambulance call and by a review of field situations that will be encountered by the EMT.

- As stated previously, each lesson provides for practice of the skills taught in that lesson. In addition, the course includes four interleaved lessons which provide the students with additional practice on skills, and provide the instructor with an opportunity to evaluate both student knowledge and skills. The course also includes a final written test of knowledge and a final practical evaluation of skills.

- In developing the course, it was determined that certain critical skills should be practiced as much as possible in various lessons throughout the course. Thus, for example, the critical skill of cardiopulmonary resuscitation is practiced or evaluated in six different lessons of the course. To ensure proficiency in the various skills, ten hours of in-hospital training and observation are recommended in emergency, surgical, intensive care, obstetrical and psychiatric areas of a hospital. Furthermore, during the period of formal training, the student should take advantage of every opportunity to participate in ambulance calls to observe the various skills being applied.

- In general, lessons adhere to the following pattern: the first 10 or 15 minutes are spent reviewing the material covered in the preceding lesson; next, the new topic is introduced and presented by means of lecture, slides, film or demonstrations; and, when appropriate, the lesson ends with supervised individual practice. For practice periods, a class divides into groups of not more than 10 students who then practice the new procedures and skills with actual ambulance equipment, manikins or with each other

acting as patients, under the supervision of an assistant instructor for each group. The lesson ends with a brief review of the material covered.

Outline of Content of Instructor's Lesson Plans

- Objectives and Scope of Course
- Required Texts and Supplementary References
- Using the Lesson Plan
- Instructor Qualifications and Responsibilities
  - aiding student learning
  - maintaining records
  - developing test materials
  - in-hospital training
- Student Requirements for course Completion
- Lesson plans

Lesson	Title
1	The Emergency Medical Technician (EMT)--His Role, Responsibilities and Equipment
2	Airway Obstruction and Pulmonary Arrest
3	Mechanical Aids to Breathing and Pulmonary Resuscitation
4.	Cardiac Arrest
5	Bleeding, shock and Practice on Airway Care, Pulmonary Resuscitation and Cardiopulmonary Resuscitation
6	Practice, Test and Evaluation--Airway Care, Pulmonary Arrest, Cardiac Arrest, Bleeding and Shock
7	Wounds
8	Fractures of the Upper Extremity
9	Fractures of the Lower Extremity
10	Injuries of the Head, Face, Neck and Spine
11	Injuries to the Eye, Chest, Abdomen, Pelvis, Genitalia
12	Practice, Test and Evaluation--Injuries I
13	Practice, Test and Evaluation--Injuries II

14 Medical Emergencies--I

15 Medical Emergencies--II

16 Childbirth and Problems of Child Patients

17 Lifting and Moving Patients

18 Practice, Test and Evaluation--Medical Emergencies, Emergency Childbirth, Lifting and Moving

19 Environmental Emergencies

20 Extrication from Automobiles

21 Operations--Driving an Emergency Vehicle, Maintaining a Safe and Ready Vehicle, Records and Reports, Communications and Procedures at Hospital Emergency Rooms

22 Responding to an Ambulance Call

23 Situational Review

24 Final Written Test

25 Final Practical Evaluation of Skills

- APPENDICES

  A. Guidance for Developing Test Materials and Conducting Practice, Test and Evaluation Lessons

  B. Guidance for Effective Teaching

  C. References

  D. Student Hand-out Forms

The Contract Manager has certified that the contractor's work on this project has been satisfactorily completed and that all contractual obligations have been met.

executive summary

A SYNOPSIS OF A RECENTLY RELEASED NATIONAL HIGHWAY SAFETY BUREAU RESEARCH REPORT

BASIC TRAINING PROGRAM FOR EMERGENCY MEDICAL TECHNICIAN - AMBULANCE

COURSE GUIDE AND COURSE COORDINATOR ORIENTATION PROGRAM

The purpose of this study was to develop guidelines and supporting materials for a short term course of instruction for emergency medical service personnel at the entry level.

The contractor developed a training program consisting of three guidance documents and a final report under the general title: Basic Training Program for Emergency Medical Technician - Ambulance. This summary briefs two of the guidance documents - The Course Guide and Course Coordinator Orientation Program, which has been published in one pamphlet and is available through the U.S. Government Printing Office.* (The companion document entitled, "Concepts and Recommendations", HS-800 181, is also available from GPO -- a third document, the detailed "Instructor's Lesson Plans" will be published by GPO as a separate document at a later date.)

Contract No. FH-11-6967	Award Amount	: $78,562.00
Dunlap & Associates, Inc.	Date Report Due	: 10/15/69
Darien, Connecticut 06820	Date Report Rec'd	: 10/15/69
NHSB No. HS-800 182	Release Date	: 10/22/69

Sub-Title: Course Guide and Course Coordinator Orientation Program

*(Available through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price 30 cents. [USGPO: 1970 0-372-389])

GENERAL SUMMARY

A number of government and medical organizations in the United States have recognized the need for training ambulance personnel in emergency medical care. Under the provisions of the Highway Safety Act of 1966, the National Highway Safety Bureau published Highway Safety Program Standard No. 11 - Emergency Medical Services. Based primarily on guidelines and recommendations of

the National Academy of Sciences' Committee on Emergency Medical Services, Standard No. 11 recommends that all ambulances be equipped with certain life saving equipment and manned by at least two persons trained in specified areas of emergency care. The Standard clearly identifies the responsibility of ambulance services to provide more than transportation alone. Specifically, these services should furnish skilled emergency medical care to victims of all injuries and medical emergencies. Further, the Standard identified the need to establish an emergency care career pattern which provides attractive compensation, prestige and recognition commensurate with the services provided by ambulance personnel.

One of the central areas identified in the field of emergency medical care was the need for the development of programs of instruction for ambulance personnel which could be made available to the States as guidelines for implementing the Highway Safety Program Standard No. 11. The development of a basic training course at the entry level is a necessary first step in an extended program to increase the competence and professionalism of all ambulance personnel. The objective of this course is to develop or up-grade the skill levels of all individuals involved in providing emergency medical care services. The course encompasses the knowledge and skills required to perform all emergency care procedures short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician.

Part I. COURSE GUIDE

- The contractor identified the tasks which ambulance personnel would be expected to perform, and the skills and knowledge they should possess in order to give prompt emergency care under a wide range of emergency conditions. With this background, a Course Guide was developed which contains the necessary administrative and logistic information required to organize, conduct and standardize a basic training course for Emergency Medical Technician - Ambulance. It contains a detailed outline of the course; prerequisites for both students and instructors; suggested scheduling and class size; requirements for facilities, training aids and reference material; and guidelines for conducting the course. The course is designed to be under the supervision of a physician.

- The course emphasizes the development of student skill in recognition of symptoms of illnesses and injuries and proper procedures of emergency care. As such, reliance is placed heavily on demonstration and practice as a teaching method. Each lesson allows practice of specific skills covered in the lesson, as appropriate; and interleaved practice, test, and evaluation sessions are designed to assure attainment of proficiency levels in all skills.

- Specific objectives of the course are as follows:

  - To teach students the overall role and responsibilities of the emergency technician in performing both the emergency care and operational aspects of his job.

  - To develop student skill in diagnosis and all emergency treatment procedures short of those rendered by physicians or by paramedical personnel under the direct supervision of a physician.

  - To develop student skill in the use of and care for all equipment required to accomplish his job.

- The total course consists of 25 lessons involving 71 hours of classroom training plus 10 hours of in-hospital observation and training for a total of 81 hours. The first lesson is devoted to an overview of the emergency medical technician's job, a description of the training course and an overview of anatomy and physiology. It is followed by lessons on life threatening emergencies, injuries, common medical emergencies, childbirth and problems of child patients, lifting and moving patients, environmental emergencies, extrication from automobiles, and operational aspects of the EMT's job. Two lessons provide for an integration of operational and medical knowledge by a discussion of student responsibilities during various phases of responding to an ambulance call and by a review of field situations that will be encountered by the EMT.

- As stated previously, each lesson provides for practice of the skills taught in that lesson. In addition, the course includes four interleaved lessons which provide the students with additional practice on skills, and provide the instructor with an opportunity to evaluate both student knowledge and skills. The course also includes a final written test of knowledge and a final practical evaluation of skills.

- In general, lessons adhere to the following pattern: the first 10 or 15 minutes are spent reviewing the material covered in the preceding lesson; next, the new topic is introduced and presented by means of lecture, slides, film or demonstrations; and, when appropriate, the lesson ends with supervised individual practice. For practice periods, a class divides into groups of not more than 10 students who then proactice the new procedures and skills with actual ambulance equipment, manikins or each other acting as patients, under the supervision of an assistant instructor for each group. The lesson ends with a brief review of the material covered.

- The plan of each lesson and the organization of the course as a whole are designed to provide students with changes of pace, and to use methods of instruction within lessons that help students maintain their interest and recall and relate material from one lesson to the next.

- Emphasis in the course is placed on the acquisition of practical skills; basic knowledge about the parts and systems of the human body is acquired as background for learning particular emergency care procedures for dealing with specific injuries or medical emergencies. As appropriate, every lesson includes practice in specific skills. And, with separate practice, test and evaluation lessons, the design of the course provides frequent opportunities for practice and the repetition of typical "problems" under a variety of simulated conditions. The design of the lessons and the course is intended to provide conditions for learning that support the course objectives of imparting practical knowledge and skills, and of teaching students how to deal with all types of emergencies under a variety of circumstances.

- In developing the course, it was determined that certain critical skills should be practiced as much as possible in various lessons throughout the course. Thus, for example, the critical skill of cardiopulmonary resuscitation is practiced or evaluated in six different lessons of the course. To ensure proficiency in the various skills, ten hours of in-hospital training and observation are recommended in emergency, surgical, intensive care, obstetrical and psychiatric areas of a hospital. Furthermore, during the period of formal training, the student should take advantage of every opportunity to participate in ambulance calls to observe the various skills being applied.

Part II. COURSE COORDINATOR ORIENTATION PROGRAM

- This Guide has been prepared to aid state officials in organizing and presenting an orientation program for coordinators of the basic emergency medical technician (EMT) training course. Initially, the orientation program would probably be conducted at the state level by the same department that is responsible for implementing the basic EMT training program. Subsequently, the orientation program could be given at either the state or local level by trained and experienced course coordinators.

- The course coordinator has the prime responsibility for organizing and conducting the basic training course at the local level. He is responsible for planning the program and assuring that the requisite skills and knowledge are taught.

Specific responsibilities include selecting qualified instructors to teach each lesson, selecting appropriate facilities for the course, scheduling lessons, assuring that individual instructors have the proper equipment and supplies needed to teach their lessons, maintaining master records on student attendance and performance, counseling slow learners in specific topic areas as appropriate, and certifying that individual students have successfully completed the course. Since the course coordinator is responsible for a primarily medically-oriented course, it is recommended that he be a physician, preferably knowledgeable in the area of emergency care.

- Since both the state officials responsible for the EMT training program and the physicians serving as course coordinators are assumed to have heavy responsibilities in addition to EMT training, the orientation program described herein has been designed to be given in one day; it requires approximately 5 hours. It may be given at any time or place of assembly that is convenient to both state officials and the course coordinators involved.

- The primary reference document for the orientation program is the Course Guide, which was prepared to aid course coordinators and other individuals responsible for planning and implementing EMT training programs. Other references include the Instructor's Lesson Plans, which were prepared to aid individual instructors in conducting each lesson; the recommended student reference text for the course entitled Emergency Care and Transportation of the Sick and Injured, prepared by the Committee on Injuries of the American Academy of Orthopaedic Surgeons; and a report entitled Concepts and Recommendations, which describes the training program and other requirements within the context of an EMT career structure.

- The orientation program provides an overview of the state EMT training and licensing program in relation to its overall emergency medical service plan; objectives, scope and orientation of the EMT course; functions of the EMT; and medicolegal aspects of the EMT's job. In addition, it includes a discussion of all documents associated with the course as well as details for planning the course, teaching each lesson, developing test materials and conducting evaluation lessons, and course coordinator responsibilities for briefing individual lesson instructors.

Briefly, the outline of the orientation program is as follows:

- Introduction
- Background

- Overview of the EMT Course
- Course Documents
- Planning the Course
- Teaching a Lesson
- Developing Test Materials and Conducting Evaluation Lessons
- Course Coordinator Responsibility for Briefing Instructors

The Contract Manager's approval has been granted that the contractor's work on this project has been satisfactorily completed and that all contractual obligations have been met.

executive summary

A SYNOPSIS OF A RECENTLY RELEASED NATIONAL HIGHWAY SAFETY BUREAU RESEARCH REPORT

BASIC TRAINING PROGRAM FOR EMERGENCY MEDICAL TECHNICIAN - AMBULANCE

CONCEPTS AND RECOMMENDATIONS

The purpose of this study was to develop guidelines and supporting materials for a short term course of instruction for emergency medical service personnel at the entry level.

The contractor developed a training program, consisting of three guidance documents and a final report under the general title: Basic Training Program for Emergency Medical Technician - Ambulance. This summary briefs the final report, titled: Concepts and Recommendations, which is available through the U. S. Government Printing Office.* (Of the three guidance documents, Course Guide and Course Coordinator Orientation Program has been combined in one publication and is also available at GPO. The third document, the Instructors Lesson Plans, will also be made available by GPO as a separate document at a later date.)

Contract No. FH-11-6967
Dunlap & Associates, Inc.
Darien, Connecticut 06820
NHSB No. HS-800 181

Award Amount : $78,562.00
Date Rep't Due : 10/15/69
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Release Date : 10/22/69

Sub-Title: Concepts and Recommendations

*(Available through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price 35 cents. [USGPO:1970 0-372-388])

The main objective of the work covered in this report was to develop and pilot test detailed lesson plans and instructor guidelines for organizing, administering and teaching a basic course for ambulance personnel with emphasis on the medical aspects of training. This included the identification of a medically acceptable text(s) or manual(s) for use as part of the course, the prerequisites for selecting students and the qualifications of instructors. Secondary objectives of the project were to outline [illegible] additional courses that would include refresher and advanced training courses and a program for Course Coordinators and instructors.

Following a short "Introduction," the present report is organized into four main sections. Section II describes the concept of emergency medical technician as a new paramedical career and discusses requirements for basic training and work experience, the need for a national registry and possible career opportunities open to qualified personnel. Section III outlines the work that has gone into developing and pilot testing a basic training course in emergency medical care and summarizes the course and the format and content of the related Instructor's Lesson Plans and Course Guide. Section IV explores requirements for additional training courses, and in particular for refresher and advanced courses, as well as the need to develop a program for Course Coordinators and instructors. Section V presents recommendations for steps that could be taken to assist in upgrading the performance and status of ambulance personnel and lead to new formal standards for training and licensing individuals as emergency medical technicians to perform ambulance, emergency room and related emergency medical service duties.

MAJOR CONCLUSIONS AND RECOMMENDATIONS

- Basic training should assist a trainee to develop a broad range of basic and practical skills in providing emergency medical care to the sick and injured and in performing the operational aspects of an Emergency Medical Trainee's (EMT's) duties. He would be taught the fundamentals of emergency care, transportation, extrication, and patient handling. He would become familiar with the structure and functions of the human body as they relate to common medical conditions and states of trauma encountered on the job. Practical training would be stressed as would the application of specific emergency care techniques to particular types of injuries and medical emergencies.

- The trainee would generalize from his newly acquired repertory of skills and knowledge through direct experience with a variety of situations.

- It is proposed that a basic trainee should be 18 years or more of age and should have the equivalent of a high school education. Various model programs and established practices require a trainee in emergency medical care to be 21 years old, and to have completed both high school and the military service. For any one ambulance service operator, a 21-year old man with a high school diploma and military discharge is generally assumed to be a "better risk" than a younger man without formal credentials.

- Instruction at the basic level should be conducted by individuals experienced in emergency treatment and transportation of the sick and injured. Such people could be physicians, nurses, ambulance drivers/attendants or other paramedical personnel. Where possible, it would be advisable to employ a mixture of instructor personnel, utilizing their respective types of expertise.

- In the absence of accurate data on the existing or projected demand for emergency medical training, it is assumed that at the inception of this training program most of the trainees are likely to be active in the field and that the demand for the basic course will be high. Then, as some point in time is reached, the relatively high initial demand for the course will diminish. This should occur because the rate of course completion among employed personnel will probably exceed the rate of prospective or newly hired applicants requiring training.

- Over the "short run" (high demand) phase of training, courses could be conducted by local instructors under the direction of local physicians at various employment sites within a specified region. It is recommended that the course be given at a local hospital; however, the course could be conducted at any convenient place of assembly. In all cases, coordination with local medical authorities should be maintained during all phases of training.

- Over the "long run" (low demand) phase of entrance level training, courses could be scheduled at regional training centers.

- Trainees should have an opportunity to become licensed medical technicians by accumulating part-time hospital experience. It is suggested that practical experience be required for licensing as an emergency medical technician, and that requirements should be met within a period of one year after the certified completion of an accredited training course.

- An individual, if employed full-time as an emergency medical technician, should be required to take a refresher course and pass an examination in emergency medical care at least once every two years in order to keep his license current.

- A refresher course should be taken at least every two years after completing basic training. Such a course would be equal in scope to the basic course, but limited in length--only about 20 to 25 hours of instruction. It would have a dual function of serving as a review and providing an opportunity for trainees to receive instruction in improved techniques.

- The purpose of the refresher course (with its final examination and practical test) is to ensure that all EMT's maintain a high level of professional skill.

- It is anticipated that the demand for a refresher course will stabilize at a rather high level due to its iterative nature and role as a requirement for license renewal.

o Advance training in emergency medical care will have to be developed for EMT's with a high level of ability, interest and motivation (as well as practical experience) if the greatest potential use of ambulance crews for life saving is to be realized.

  - The philosophy of teaching an advanced trainee should be essentially one of educating (as distinct from training) him in the more general and theoretical aspects of emergency medical care. Rather than being iterative, advanced training should begin with the general and assist the trainee in developing deductive capabilities as they relate to specific diagnostic and treatment actions. By developing a sense of medical judgment, such an approach would also prepare students to cope more effectively with the unforeseen in the treatment of medical emergencies.

  - It would be essential for the advanced paramedical trainee to have in-hospital preceptor-type experience, including direct observation and practical application under the supervision of the medical staff.

  - The advanced trainee should be at least 21 years of age and have, preferably, a high school education or its equivalent. He should have demonstrated a high level of motivation and interest and an ability to study from college level texts, and should be able to comprehend the more complex diagnostic and treatment tasks required in advanced paramedical emergency medical care.

  - Due to the nature of the material and depth of coverage at the advanced level, instruction should be by a physician. Again, a mixture of expertise could be utilized, including perhaps the services of a general practitioner, an anesthesiologist, an obstetrician, and an orthopaedic surgeon experienced in emergency department and intensive care duties. Experienced paramedical instructors, working in liaison with the physicians, might also be utilized as assistant instructors during practice sessions and seminars.

- A course coordinator would benefit from an introduction program consisting of techniques for planning and implementing the basic training course. Individual instructors would benefit from an indoctrination session defining their roles and responsibilities in conducting each lesson.

  - It is recommended that an orientation program of approximately 5 hours duration be established for course coordinators only. It should be the responsibility of the course coordinator to brief the individual lesson instructors regarding their roles and responsibilities.

  - Consideration should be given to holding state or regional seminars that could be attended by course coordinators and interested instructors.

RECOMMENDATIONS

- The title of ambulance attendant/driver should be changed to Emergency Medical Technician (EMT) to raise the status of the profession and in keeping with the titles of other paramedical personnel.

- To perform as an EMT, individuals should be certified, licensed and registered.

- As first step toward qualifying as an EMT, individuals with the necessary prerequisites should be required to successfully complete a basic training course.

- After successful completion of the course, individuals should be certified as emergency medical technicians and registered in an internship status which would permit them to operate as EMT's under the supervision of a licensed EMT.

- After a specified period of supervised experience and successful demonstration of ability to apply the knowledges and skills gained in the course, the individual should be licensed as an EMT and registered as such.

- Licenses should be renewed periodically as a means of ensuring maintenance of proficiency.

- Successful completion of a refresher training course, as defined herein, should be a prerequisite for license renewal. The refresher course should be taken every two years.

- If at any time during his career the EMT does not work as a technician for a specified period of time his license shall

expire and he shall be required to successfully complete a refresher training course as a prerequisite for license renewal.

- o During the initial period of implementation of this program, consideration should be given to waiving the requirements to complete the basic training course for individuals who have extensive training and experience in the field of emergency medical care and simply require such individuals upon recommendation by a physician, to complete successfully a refresher training course as a prerequisite for registration, certification and licensing.

- o To further improve emergency medical care administered by EMT's, an advanced training program, based on requirements generated by the medical authorities, should be developed and implemented to provide the skills and knowledge necessary to perform more advanced procedures.

- o An organization at the national level, e.g., the Council on Medical Education of the AMA, should be designated to accredit the institution, organization, etc., responsible for conducting any of the recommended training programs.

- o A national registry for EMT's should be established to maintain records on the status of all certified and licensed EMT's.

- o A high level study group should be convened to study and make recommendations for:

  - A national registry of emergency medical technicians

  - The requirements for training and practical experience for licensing individuals to work as emergency medical technicians.

  - Guidelines to states on accepting for an interim period only various combinations of existing courses as equivalent to the standards specified above.

The Contract Manager's approval has been granted that the contractor's work on this project has been satisfactorily completed and that all contractual obligations have been met.